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Guilford Technical Institute

Jamestown, North Carolina

1965-1966

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GUILFORD TECHNICAL INSTITUTE

JAMESTOWN, NORTH CAROLINA

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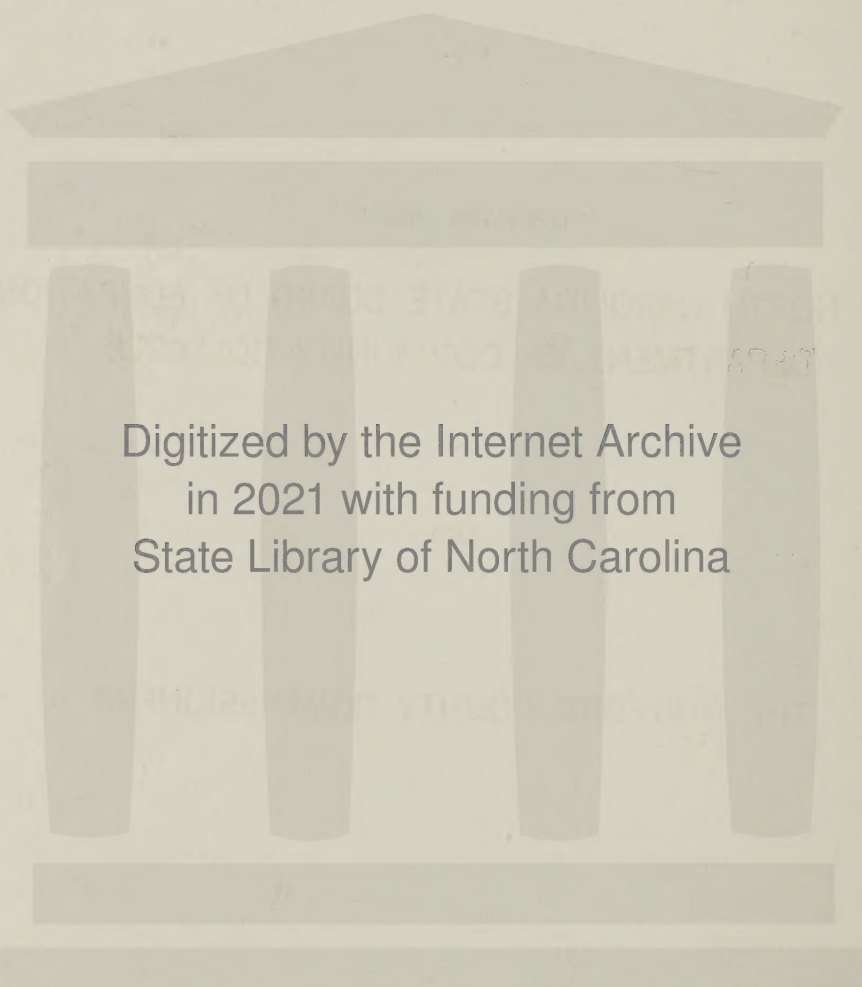
THE NORTH CAROLINA STATE BOARD OF EDUCATION
DEPARTMENT OF COMMUNITY COLLEGES

AND

THE GUILFORD COUNTY COMMISSIONERS

VOL. I

1965-1966



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**DEPARTMENT OF COMMUNITY COLLEGES
STATE BOARD OF EDUCATION**

Academic Calendar

1965-1966

FALL QUARTER: 1965

September 7-8	(Tuesday-Wednesday)	Registration
September 9	(Thursday)	Orientation
September 10	(Friday)	Orientation
September 13	(Monday)	Classes begin
September 14	(Tuesday)	Last day to register
September 20	(Monday)	Last day to change or add courses
November 24	(Wednesday 10:30 P.M.)	Fall Quarter ends
November 25-26		Thanksgiving Holidays

WINTER QUARTER: 1965-66

November 29-30	(Monday-Tuesday)	Registration
December 1	(Wednesday)	Registration
December 2	(Thursday)	Classes begin
December 6	(Monday)	Last day to register
December 13	(Monday)	Last day to change or add courses
December 22	(Wednesday 10:30 P.M.)	Classes end
December 23-January 2		Christmas Holidays
January 3	(Monday)	Classes resume
February 25	(Friday)	Winter Quarter ends

SPRING QUARTER: 1966

March 2-3	(Wednesday-Thursday)	Registration
March 7	(Monday)	Classes begin
March 8	(Tuesday)	Last day to register
March 15	(Tuesday)	Last day to change or add courses
April 7	(Thursday 10:30 P.M.)	Classes end
April 8-11	(Friday-Monday)	Easter Holidays
April 12	(Tuesday)	Classes resume
May 24	(Tuesday)	Spring Quarter ends

SUMMER QUARTER:

June 6-7	(Monday-Tuesday)	Registration
June 8	(Wednesday)	Classes begin
June 13	(Monday)	Last day to register
June 20	(Monday)	Last day to change or add courses
July 4	(Monday)	July 4 Holiday
August 24	(Wednesday)	Summer Quarter ends

SUMMER INTERNSHIP

June 12-August 20

FOREWORD

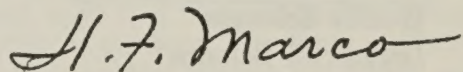
THE TECHNICAL INSTITUTE AND COMMUNITY COLLEGES IN AMERICAN HIGHER EDUCATION

The young adult of today finds himself in the midst of a complex society. If he is to function successfully, further training or advanced education is no longer a question of desirability; *it is a necessity*. Lack of funds for such training or education is not a major problem. There is a technical institute or community college within the reach of everyone. Sound practical education is available at low cost. The principal requirements are the desire to learn and the willingness to assume adult responsibilities.

The person with only a high school education is likely to experience considerable difficulty in securing a job in today's ever-expanding technology. During his years of gainful employment, a college education is worth well over \$100,000 to the individual in earning power. Education is the individual's way to knowledge. Knowledge is his key to a better life and the basis of his self-fulfillment. Knowledge is the source of strength for our nation.

In the Technical Institute or Community College, emphasis is on the applied fundamental courses which prepare an individual for employment in the semi-professional areas of our economy. These courses require the same academic scholarship, the same accreditation, the same text material, and the same quality of instruction as are required in the four year institutions. Theoretical, advanced, and additional liberal arts courses in a particular field of study are not included. Therefore, the Technical Institute awards the Associate in Applied Science degree in contrast to the four-year Bachelor of Science degree.

There is no substitute for quality; there is no substitute for education; there is no substitute for knowledge—these never occur by accident. They are the result of determined, intelligent effort.



Herbert F. Marco, Ph.D.
President

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GENERAL INFORMATION

HISTORY

The Guilford Technical Institute, originally established as the Guilford Industrial Education Center in 1958, is located at the eastern edge of Jamestown on U. S. Highway 29A-70A. The Institute is within easy commuting distance of Greensboro, High Point, and all sections of Guilford County.

The Center was organized through the cooperative efforts of the State Department of Trade and Industrial Education and the school systems of Guilford County, Greensboro, and High Point. Under legislation enacted in 1963, administration of the Industrial Education Centers was transferred to the State Board of Education, Department of Community Colleges.

On May 6, 1965, the Guilford Technical Institute was elevated to the degree status and was vested with the authority to grant the Associate in Applied Science degree. Local control is vested in a Board of Trustees.

Students are actively encouraged to maintain sound academic and personal standards and to make "striving for excellence" a way of life. The Institute stresses quality in achievement and a sense of social responsibility as necessary goals for a degree and for a better life.

FACULTY

Essential to the success of a sound educational program is a quality faculty, dedicated to the aims and ideals of the Institute and committed to the encouragement of each student to develop his potential. Such a faculty is the backbone of the Institute. In the technical areas each instructor holds a recognized, accredited degree in his professional field. In the vocational area years of experience and skill are the instructors qualifications.

COMPREHENSIVE PROGRAM

The programs of the Institute are for both men and women of all ages. They are varied in nature and breadth to provide for students of differing interests and abilities. These comprehensive programs make it possible for students to complete within two years, programs of integrated studies which may lead to immediate employment as semi-professional or professional persons. For those students who have not decided on career choices, special studies programs are provided as a basis for mature thought in selecting career pursuits or a general education.

DAY AND EVENING DIVISIONS

It is possible to earn an Associate in Applied Science degree in either the day or the evening division. A full-time student is one

who carries a minimum of twelve quarter hours of academic work. Those who carry fewer than twelve quarter hours are considered part-time students. However, part-time students are bonafide members of the student body and are entitled to all the privileges of full-time students. It will be necessary for part-time students to attend a longer period of time to complete the normal two-year prescribed curriculum.

The evening division has the same status as the day division. The same faculty is common to both; therefore, no difference is made in the quality of instruction rendered.

PROGRAMS OFFERED

CAREER PROGRAMS

Programs leading to the Associate in Applied Science degree are offered in Business Administration with specialization in Accounting and Executive or Medical Secretary; in Commercial Art and Advertising Design; in Electrical, Electronics, Furniture, and Mechanical Technologies; and in the Health Sciences with options in nursing and dental hygiene.

The two-year programs combine career preparation with a background in general education. The student is prepared to enter the world of work as a competent technician on a semi-professional level or as an executive assistant.

If a graduate of the Institute desires to continue his education at a college or university, many of the course credits may be transferred. However, it is the responsibility of the student to check in advance with the institution of his choice to determine which courses would be transferable.

VOCATIONAL PROGRAMS

One-year vocational programs are offered in air-conditioning and refrigeration, automotive mechanics, dental assisting, drafting, furniture making, knitting machine fixing, machine shop practice, practical nursing, upholstery, and welding. These courses are designed to meet the needs of local industry and to provide skills for those choosing these vocations. Upon satisfactory completion of the required curriculum, the student will be awarded the appropriate certificate or diploma. For additional information write for the *Vocational Preparatory Curricula: Supplementary Catalogue*.

SPECIALIZED ADULT EDUCATION

The Institute conducts an Evening Program to meet the educational requirements of men and women who desire to update or upgrade themselves to fill the growing needs of industry for such people.

Special classes are available to industrial organizations, apprentice groups, and individuals when there is a sufficient number of students to begin a class. A class may be initiated with as many as fifteen interested people who desire to take a particular course. Class hours are arranged to suit the convenience of employed students when possible.

EXTENSION CLASSES

Extension classes are those course offerings that are not an integral part of an approved one or two-year curriculum. These classes will be announced periodically through the usual channels of public communications.

SUPERVISORY PERSONNEL DEVELOPMENT

Short unit courses are taught by experienced specialists. These courses are arranged to meet the needs of students and industrial enterprises.

PLACEMENT TESTS

Applicants for admission to a career or a degree program must take a general aptitude test as well as other tests which may be required for specific course areas. These tests will help the applicant determine which program best fits his aptitudes and interests. In most cases, the applicant will be permitted to pursue the program of his choice.

A LOOK TO THE FUTURE

Present indications are that the Institute will outgrow the existing plant. Provisions are now being drafted for a modern college facility housing the different disciplines. A new library building will probably be the first of the series. An adequate, pleasant cafeteria will also be incorporated, but no housing facilities are anticipated. The Institute in a strict sense is a commuter's college serving an area within a radius of approximately twenty-five miles.

FACILITIES AND SPECIAL SERVICES

THE PHYSICAL PLANT

The campus consists of approximately one-hundred wooded acres. All the buildings on the campus are of brick and concrete construction; they are steam heated and adequately lighted for night work. Many of the classrooms and laboratories are air conditioned.

The buildings are:

OLD MAIN, containing the administrative offices, the library, the student lounge and an engineering drafting room. The **WEST WING** of this building houses two laboratories for the Business

Education Department, an engineering drafting room, the student book store, and business office. The commercial art laboratories, the textile machine laboratory, and classrooms occupy the EAST WING of this building.

MACHINERY HALL, built in 1959, houses the air conditioning, automotive, electrical, machine tool and welding shops, and a chemistry laboratory.

FURNITURE HALL, constructed in 1965, was especially designed to house the two-year Furniture Manufacturing Technician curriculum. It contains the upholstery, upholstery sewing, wood working machinery shop, classrooms, and faculty offices.

HEALTH-SCIENCE HALL, containing the biology and clinical practice laboratories and classrooms is located near the entrance of the campus.

GUIDANCE SERVICES

Counseling services are available to the students concerning the areas of study in which the Institute is prepared to offer instruction and training, or to counsel with those persons who desire to take a re-training or up-grading course leading to a new field of work. Students are urged to make full use of the guidance services of the Institute, in both academic and personal problems that may affect their educational progress.

PLACEMENT SERVICES

If the student requests aid, the Institute will assist him in securing employment in local business or industry whenever possible. There is no charge to the student or to the employer.

LIBRARY

An excellent library is available for reference, research, browsing, and study. A trained librarian is on duty at all times to provide assistance, reading guidance, and orientation in the use of the library. More than 5,000 volumes, primarily in the technical and scientific fields, have been carefully selected and catalogued. New books and other printed materials are being added constantly, many of which are in other fields including classical fiction, history, biography, personal development and self-improvement. The up-to-date reference collections, the information file, periodicals, and newspapers are technical and non-technical in nature.

BOOKSTORE

Students are required to purchase their textbooks. For their convenience, the Institute maintains a bookstore in the WEST WING at which they may purchase required books and materials.

DRAFT DEFERMENT

A student may be exempted from the Selective Service Draft as long as he is enrolled as a full-time student and is doing satisfactory work at the Institute. Deferment forms will be sent to the Selective Service Board upon request of the student.

HOUSING

There are no dormitory or boarding facilities on the school premises. Applicants who request aid in finding housing will be assisted in every way possible. Nearby restaurants offer food services.

INSURANCE

A group accident insurance policy is available to all members and students for a fee of \$2.00 for coverage during the school year, ending on July 1. The policy covers insured persons while on the campus from one hour before classes begin until one hour after classes end, and while on any school-sponsored trip. Brochures are available in the business office.

SCHOLARSHIPS AND LOANS

The *State Board of Education* has made available, to the Department of Community Colleges, funds to be used as loans to students in the institutions of that department. Applications and further information may be secured from the Director of Student Personnel. The maximum amount of each loan is \$300 per year. Interest of 3½% is payable on the loan only after the student graduates, provided he graduates within the prescribed time for his course. A student may be granted up to five years after graduation to repay principal and interest on the loan.

The *Veterans Administration* offers educational assistance, up to 36 months, for sons and daughters of certain deceased or totally and permanently disabled veterans, generally between 18 and 23 years of age. An allowance of up to \$110 per month can be made to students under the program. For further information, see or write your nearest Veterans Administration office.

Grants to the Institute in the form of scholarship funds are anticipated. Students will be informed when such funds are made available.

SNACK ROOM-LOUNGE

A snack room-lounge is provided for the convenience of the students during their class intermission.

ADMISSION PROCEDURE

GENERAL ADMISSION POLICY

The Guilford Technical Institute is a co-educational institution open to any individual who meets the admission requirements for the particular course in which he chooses to enroll.

For admission to a Technical curriculum the applicant must be a high school graduate. For admission to a Vocational Preparatory curriculum the applicant should be a high school graduate or a mature adult (eighteen years or older) who is able to demonstrate experience and mental growth equivalent to that of a high school graduate. All applicants must make an acceptable score on the *General Aptitude Test Battery*. In addition to the general admission requirements, special standards must be met for some areas of training. (See course prerequisites.)

TECHNICIAN CURRICULA STUDENTS

The applicant for this program should have high school credit for two units of mathematics, one of which is in algebra and the other in plane geometry, or an equivalent in modern mathematics. Competence may be determined by appropriate tests. Those who fail will be required to complete successfully a prerequisite mathematics course to remove the deficiency. A person with deficiencies may be admitted when there is strong indication of probable success. It is desirable that the applicant have complete one unit of physical science with laboratory.

PROVISIONAL STUDENTS

Applicants applying too late to take the required pre-entrance examinations may be given brief tests; if the results appear satisfactory, these applicants may be admitted as Provisional Students. Later, these persons must complete the pre-entrance examinations and any other requirements for good standing.

SPECIAL STUDENTS

Applicants who are not academically prepared to enter programs of their choice may enroll in a special program devised to prepare them for admission to their preferred curriculum. Persons desiring to attend the Institute under this classification should request an appointment with the Admissions Office. Individual programs of study will be worked out if the Admissions Office and the interested party feel that participation would prove beneficial. These programs do not lead toward a degree or diploma.

APPLICATION FORMS

Application forms for admission may be secured by writing to the *Admissions Office, Guilford Technical Institute, Jamestown,*

North Carolina. Prospective students should submit the completed application form well in advance of the beginning date of the quarter in which they wish to enroll.

ENROLLMENT

Students who meet the entrance requirements may enroll at the beginning of any quarter. Normally, students entering a one or two-year curriculum will enroll initially in the Fall Quarter. Registration will be closed after a class has been in session for five (5) class periods.

REGISTRATION PROCEDURE

For admission to the Institute an applicant must:

1. Complete and submit the application form.
2. Request that institutions which he previously attended send an official transcript to the Admissions Office.
3. Submit a completed health certificate.
4. Have a personal interview with a designated staff member (counselor, instructor, or department head).
5. Take the *General Aptitude Test Battery* (GATB) and/or such other tests as may be required for specific programs.
6. Possess the minimum physical standards necessary to carry out all requirements of the job for which he is preparing. When there is a question, a certificate from a reputable physician will be required.
7. Special standards may be required for some areas such as nursing or dental hygiene.

FEES

Registration Fees: An annual registration fee of \$2.00 is required of all students. This fee is payable at the time of registration and is **not refundable**.

Tuition: (Legal State residents): All students enrolled in the Technician curricula will pay a \$30.00 tuition fee per quarter. (Out-of-state residents will pay a \$4.00 registration fee and a \$75.00 tuition fee per quarter.)

Deposit: A \$20.00 **non-refundable** deposit must be paid when an applicant has been accepted for admission to the Institute. This deposit will apply toward payment of the applicant's first quarter tuition. (Note: A tuition fee of \$23.00 per quarter, payable in advance, will be charged for all Vocational Preparatory courses.)

Late Registration: A student registering later than the dates designated as registration days must pay an additional fee of \$1.00.

Textbooks: The cost of textbooks and materials varies with the course.

Transcript: One transcript of a student's record will be issued free of charge; a fee of \$1.00 will be charged for each additional transcript.

Payment of Fees: All fees for the first quarter are due upon enrollment, unless prior arrangements for delayed payment are made with the Business Office. Subsequently, fees are due on the corresponding date in the following quarters.

Checks or money orders *in the even amount of fees due* are to be made payable to the Guilford Technical Institute. Receipts will be issued at the time of payment.

Evidence of payment of fees will be required by the instructor at the first meeting of each course.

ACADEMIC

THE SCHOOL YEAR

Three quarters of eleven weeks each, running consecutively, will constitute the academic school year.

CHANGE OF SCHEDULE

Changes of schedule, after registration has been completed and classes have begun, will be made only with the permission of the Dean of Instruction or his authorized representative and the consent of the instructors involved.

QUARTER SYSTEM

The Technician curricula are offered on the basis of an average course load of fifteen to eighteen hours per quarter for six quarters. Students enrolled in a part-time program will require a longer period of time to complete this average course load.

CREDIT

The unit of credit is the Quarter hour. A quarter hour represents one period of class work per week for one quarter or its equivalent in other forms of instruction. Two and one-half hours of laboratory work or three hours of manipulative shop practice are considered the equivalent of one quarter hour of class work.

GRADING SYSTEM

The grades *A, B, C, D, F, and I* are used by the Institute to indicate levels of achievement: *A . . . Superior; B . . . Above Aver-*

age; C . . . Average; D . . . Passing; F . . . Failure; I . . . Incomplete; WP . . . Withdrawn Passing; WF . . . Withdrawn Failing.

Incomplete

This indicates that the student has not completed some phases of the course work assigned by the instructor, or that he has an excused absence for a quiz or examination (which will be administered at a later date), but he is otherwise passing.

The "I" must be removed by satisfactorily completing the requirements during the first three weeks of the next quarter, or it automatically becomes a failure.

Withdrawn Passing

This signifies that a student has withdrawn while maintaining a passing average.

Withdrawn Failing

This signifies that a student has been dropped from the school or a course because of failing grades, excessive absences, or breach of conduct.

CERTIFICATE, DIPLOMA OR DEGREE

Upon the recommendation of the faculty the appropriate certificate, diploma, or the Associate in Applied Science degree will be awarded to the student who has successfully completed the required curriculum in which he is enrolled.

FINANCIAL RESPONSIBILITY

Financial obligations in connection with attendance at the Institute must be met before a student is eligible to register for the succeeding quarter or to graduate.

CLASS ATTENDANCE

Students are expected to be present and prompt for all regular class meetings and examinations for which they are registered. Absences from classes immediately before and after holidays are strongly discouraged. Work missed because of absences, whether excused or unexcused, must be made up promptly. A student who, for any reason, is absent for more than twenty-five percent of the class meetings in any quarter will not receive credit for the course.

PROBATION

A student is responsible at all times for knowing his academic standing.

A student may be placed on academic probation at the end of any quarter for two consecutive unsatisfactory grades. The Dean

of Instruction, a counselor, and/or the instructor will counsel with the student to help him arrive at a solution to his problem.

A student may also be placed on disciplinary probation for infraction of regulations of the Institute.

If a probation is not removed at the end of a quarter, the student *will not be permitted* to register for a sequential quarter.

WITHDRAWAL and RE-ENTRY

A record of the student's progress is maintained by the Institute. A student who has been dismissed from the Institute may apply in writing to the Academic Affairs Committee for re-admission to the Institute at the beginning of the next quarter identical to the one from which he was dismissed.

Upon subsequent approval of his application, by the committee, the student may be re-instated on academic probation for a quarter. If his grades are satisfactory at the end of this quarter, he will be removed from probation status.

In case of illness or financial hardship, a student may withdraw during any quarter and re-enter at the beginning of the next identical quarter, provided his grades at the time of his withdrawal were acceptable.

GENERAL REGULATIONS

AUTOMOBILES

Students are expected to drive carefully and courteously and to abide by all traffic regulations while on the campus. No student-parking of automobiles is permitted anywhere on the campus except in the designated parking area, which is now at the rear of the Furniture-Machine Hall. Violators are subject to a parking fine and/or disciplinary action.

CATALOGUE CHANGES

The Institute reserves the right to make changes in the regulations, courses, fees, and matters of policy announced in this publication without prior notice.

CITIZENSHIP

Students of the Institute are considered responsible citizens and are expected to conduct themselves as mature adults. Such matters as dishonesty on assignments or examinations; disregard for the rights and privileges of others; and lack of respect for school facilities, property, and the personal effects of others are basis for dismissal.

CONVOCATIONS

The Institute maintains an attitude of open-mindedness concerning faiths and creeds. The administration, faculty, and student body will share in an organized program of convocations. The convoca-

tions are primarily for the benefit of the students; hence, attendance is a requirement of the Institute.

DRESS

Students are expected to dress appropriately for all occasions in keeping with the standards of the Institute and values of the community and society. Shorts, women's slacks, or other sportswear are not permitted in the classrooms or the library. Protective garments for laboratory and shop classes are acceptable.

EXTRA-CURRICULAR ACTIVITIES

All students are encouraged to participate in student activities as provisions for these become available. Organization of sports activities such as golf, archery, and softball is anticipated. Participation in extra-curricular activities is encouraged. Such participation is a criterion for eligibility for student awards.

STUDENT AWARDS

SEDGEFIELD LIONS CLUB AWARD: The Sedgefield Lions Club grants an annual award to the "best all around" student of the Institute.

OUTSTANDING STUDENT AWARD: The faculty in each department of the Institute nominates its outstanding student for the Outstanding Student Award. These nominations are made on the basis of the student's citizenship, scholarship, and participation in student activities. A reviewing committee will determine the final recipient. Each nominee receives a departmental medal; the final recipient is awarded a trophy and his name is placed on a permanent plaque retained by the Institute.

STUDENT RESPONSIBILITY

Each student is held responsible for information published through notices and announcements placed on bulletin boards.

PROGRAMS OF STUDY

The programs of study listed on the following pages are classified as *Technician Curricula*. Each curriculum outline indicates the recommended course sequence by quarters. The letter *C* indicates class hours per week; *L*, laboratory sessions (of 2½ hours each) per week; *CH*, credit hours per quarter.

Each full-time student is required to register each quarter *for a minimum of fifteen and not more than eighteen credit hours per quarter*.

Each student will be expected to participate in the Activity Program of the Institute; however, this participation carries no academic credit.

THE INSTITUTE RESERVES THE RIGHT TO MAKE ANY CHANGES IN THIS CATALOGUE DEEMED NECESSARY AT ANY TIME WITHOUT PRIOR NOTICE.

BUSINESS ADMINISTRATION

The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. This training is aimed at preparing the student in every phase of administrative work that might be encountered in the average business enterprise.

Specific objectives of the Curriculum are to develop competency in the following areas: understanding the principles of organization and management in business operation; an understanding of and skill in effective communication in business; and understanding human relations as they apply to successful business operations.

The graduate of the Business Administration Curriculum has available to him a variety of career opportunities from the beginning sales person or office clerk to manager trainee. These opportunities include positions in advertising, banking, communications, credit, finance, the tourist industry, insurance, retailing, transportation, and wholesaling.

BUSINESS ADMINISTRATION

Course No. and Title	C	L	CH	Course No. and Title	C	L	CH
FIRST QUARTER				FOURTH QUARTER			
ENG 302 English I	3	0	3	ENG 307 Oral Communication	3	0	3
BUS 302 Typewriting (Elective)	1	2	3	BUS 364 Business Finance	3	0	3
MA 310 Business Math	3	0	3	BUS 366 Budget and Records	3	0	3
BUS 301 Intro. to Business	3	0	3	DP 311 Data Processing	2	1	3
BUS 317 Sales Development	3	0	3	SOC 314 American Government	3	0	3
HS 302 Hygiene	2	0	2				
	<hr/>	<hr/>	<hr/>		<hr/>	<hr/>	<hr/>
	15	2	17		14	1	15
SECOND QUARTER				FIFTH QUARTER			
ENG 305 English II	3	0	3	ENG 304 Speech	2	0	2
BUS 320 Accounting	4	1	5	BUS 365 Business Finance	3	0	3
SOC 310 Applied Psychology	3	0	3	BUS 327 Advertising	3	1	4
SOC 302 Economics	3	0	3	BUS 335 Business Management	3	0	3
BUS 339 Marketing	3	0	3	BUS 351 Business Law I	3	0	3
	<hr/>	<hr/>	<hr/>	BUS 337 Wholesaling	3	0	3
	16	1	17		<hr/>	<hr/>	<hr/>
					17	1	18
THIRD QUARTER				SIXTH QUARTER			
ENG 306 English III	3	0	3	BUS 368 Taxes	3	0	3
BUS 355 Accounting Records	3	0	3	BUS 333 Personnel Management	3	0	3
SOC 304 Economics	3	0	3	BUS 332 Sales Promotion Mgm.	3	0	3
BUS 316 Retailing	3	0	3	BUS 372 Principles of Supervision	3	0	3
BUS 328 Business Insurance	3	0	3	BUS 352 Business Law II	3	0	3
BUS 360 Office Machines	2	1	3	Elective	(3)	0	(3)
	<hr/>	<hr/>	<hr/>		<hr/>	<hr/>	<hr/>
	17	1	18		18	0	18

TOTAL CREDIT HOURS: 103

COMMERCIAL ART AND ADVERTISING DESIGN

The Commercial Art and Advertising Design Curriculum provides the student with instruction in illustration, layout and lettering, and design and production, thus, preparing him for both technical and creative art occupations.

The graduate may be employed by advertising agencies, design studios, department stores, newspapers, television studios, or printing and publishing houses. His activities may include designing layouts and illustrations for printing; creative posters, sign boards, billboards, and show cards; or illustrating package designs. Such a career affords the individual an opportunity for creativity and continuing professional growth and improvement.

COMMERCIAL ART AND ADVERTISING DESIGN

Course No. and Title	C	L	CH	Course No. and Title	C	L	CH
FIRST QUARTER				FOURTH QUARTER			
ENG 302 English I	3	0	3	CA 323 Com. Art & Adv. Design	3	2	5
CA 310 Survey of Art	3	0	3	SOC 314 American Government	3	0	3
CA 320 Com. Art & Adv. Design	3	4	7	CA 315 Industrial Illustrating	2	2	4
CA 311 Human Anatomy	2	1	3	CA 340 Adv. Principles	3	0	3
HS 302 Hygiene	2	0	2	CA 330 Painting & Illustrating	1	1	2
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	13	5	18		12	5	17
SECOND QUARTER				FIFTH QUARTER			
CA 321 Com. Art & Adv. Design	3	4	7	CA 324 Com. Art & Adv. Design	3	2	5
ENG 305 English II	3	0	3	CA 317 Photography	2	2	4
CA 312 Life Study	2	2	4	SOC 310 Applied Psychology	3	0	3
DD 307 General Drafting I	2	1	3	CA 341 Advertising Media	3	0	3
	<hr/>	<hr/>	<hr/>	CA 331 Painting & Illustrating	1	1	2
	10	7	17		<hr/>	<hr/>	<hr/>
					12	5	17
THIRD QUARTER				SIXTH QUARTER			
CA 322 Com. Art & Adv. Design	3	4	7	CA 325 Com. Art & Adv. Design	3	2	5
ENG 313 Advertising Copywriting	3	0	3	CA 342 Advertising Art Direction	3	0	3
CA 316 Photography	2	2	4	CA 332 Painting & Illustrating	1	1	2
BUS 317 Sales Development	3	1	4	SOC 302 Economics	3	0	3
	<hr/>	<hr/>	<hr/>	Elective	3	0	3
	11	7	18		<hr/>	<hr/>	<hr/>
					13	3	16

TOTAL CREDIT HOURS: 103

DENTAL HYGIENE

The dental hygienist usually is a young lady meeting college entrance standards, successfully attaining an above average position in her graduating class, and earning a creditable score on several batteries of tests. In her quest for professional career she is prepared for health services rich in human contacts. She achieves satisfaction from helping others and gains security in an expanding and highly regarded profession as a necessary member of the dental health team. Her duties are myriad and her responsibilities challenging.

The program at Guilford Technical Institute will include a background of basic studies, specialized instruction and directed experience. The dental

DENTAL ASSISTANT (VOCATIONAL CURRICULUM)

The primary function of the dental assistant is to serve as the chairside assistant to the dentist where she plays an active and integral role in dental procedures. For example, she prepares patients for treatment, sets out instruments in the order they are to be used, keeps the operation field clear during treatment, mixes filling materials, dental cements and passes these materials and instruments to the dentist as he needs them.

The trained dental assistant also checks equipment, sterilizes instruments, engages in laboratory work such as making study models of teeth and casting inlays and processes x-ray film and mounts it in appropriate holders.

In many offices the dental assistant also serves as receptionist and office manager, schedules appointments, and keeps records. The program at Guilford Technical Institute includes instruction in dental anatomy and physiology, bacteriology, pharmacology, oral pathology, dental materials, chairside assisting, typing, human relations, records, etc. A large portion of the student's time is spent in laboratory work and clinical experiences.

DENTAL ASSISTANT

Course No. and Title	C	L	CH	Course No. and Title	C	L	CH
FIRST QUARTER				THIRD QUARTER			
DEN 101 Dental Science	3	0	3	DEN 117 Advanced Clinical Orientation	4	8	8
DEN 112 Anatomy and Physiology	3	0	3	DEN 105 Dental First Aid	2	0	2
DEN 111 Dental Materials	4	8	8	ENG 104 Industrial Communications	2	0	2
ENG 102 Shop Communications	2	0	2	BUS 110 Accounting	2	4	4
SOC 101 Human Relations	2	0	2	BUS 109 Typing	2	2	3
ENG 101 Speed Reading Improvement	2	0	0				
	<u>16</u>	<u>8</u>	<u>18</u>		<u>12</u>	<u>14</u>	<u>19</u>
SECOND QUARTER				FOURTH QUARTER			
DEN 114 Dental Office Management	5	2	6	DEN 118 Clinical Practice	6	24	18
DEN 115 Sterilization, Equipment Care and Supplies	2	2	3		<u>6</u>	<u>24</u>	<u>18</u>
DEN 116 Clinical Orientation	5	8	9				
ENG 103 Report Writing	3	0	3				
	<u>15</u>	<u>12</u>	<u>21</u>				

The order of the above courses is subject to change to conform with facilities for clinical practice.

ELECTRICAL TECHNOLOGY

There is increased demand for competently trained technicians capable of utilizing electrical principles in today's complex industrial situations. The Electrical Technology Curriculum prepares the technician for jobs in the areas of research, design, development, production, maintenance and sales. He may work as a laboratory technician, an engineering aide, or as a liaison between the engineer and the craftsman. His training, although similar in content to that of an engineer, places less emphasis on theory and more emphasis on practical application.

ELECTRICAL TECHNOLOGY

Course No. and Title	C	L	CH
FIRST QUARTER			
MA 301 Tech. Mathematics	4	0	4
PHY 301 Physics I	3	1	4
ENG 302 English I	3	0	3
ELEC 310 Direct Current Electricity	3	2	5
HS 302 Hygiene	2	0	2
	<hr/>	<hr/>	<hr/>
	15	3	18

SECOND QUARTER			
MA 302 Tech. Mathematics	4	0	4
PHY 302 Physics II	3	1	4
ENG 305 English II	3	0	3
ELEC 311 Alternating Current Electricity	3	2	5
	<hr/>	<hr/>	<hr/>
	13	3	16

THIRD QUARTER			
MA 303 Tech. Mathematics	4	0	4
ENG 303 English III	3	0	3
SOC 301 Human Relations	2	0	2
DD 307 General Drafting	2	1	3
ELEC 312 Electrical Machines	3	2	5
	<hr/>	<hr/>	<hr/>
	14	3	17

Course No. and Title	C	L	CH
FOURTH QUARTER			
MA 304 Tech. Mathematics	3	0	3
PHY 304 Physics III	3	1	4
SOC 314 American Government	3	0	3
ELN 306 Basic Electronics	3	1	4
ELEC 313 Electric Controls & Circuits	3	1	4
	<hr/>	<hr/>	<hr/>
	15	3	18

FIFTH QUARTER			
ISc 301 Industrial Org. & Mgm.	3	0	3
ELN 307 Industrial Electronics	3	1	4
ELEC 314 Planning Elect. Installations	3	1	4
ELEC 315 Electrical Instrumentation	3	1	4
Elective	(3)	0	(3)
	<hr/>	<hr/>	<hr/>
	15	3	18

SIXTH QUARTER			
SOC 302 Economics	3	0	3
ELN 308 Industrial Electronics	3	1	4
ELEC 316 Electrical Power Systems	3	1	4
ELEC 317 Electrical Analysis & Maintenance	3	1	4
Elective	(3)	0	(3)
	<hr/>	<hr/>	<hr/>
	15	3	18

TOTAL CREDIT HOURS: 105

ELECTRONICS TECHNOLOGY

Many opportunities exist for men and women with a technical education in electronics. The Electronics Technology Curriculum provides a basic background in electronics and related theory with practical application of electronics for business and industry. These courses are designed to develop competent electronics technicians who may take their places as assistants to engineers, engineering aides, or as supervisors and equipment specialists.

ELECTRONICS TECHNOLOGY

Course No. and Title		C	L	CH	Course No. and Title		C	L	CH
FIRST QUARTER					FOURTH QUARTER				
MA 301	Tech. Mathematics	4	0	4	MA 304	Tech. Mathematics	3	0	3
PHY 301	Physics I	3	1	4	PHY 304	Light & Sound	3	1	4
ENG 302	English I	3	0	3	SOC 314	American Government	3	0	3
ELEC 310	Direct Current Electricity	3	2	5	ELN 313	Electronics II	4	2	6
HS 302	Hygiene	2	0	2			13	3	16
		15	3	18					
SECOND QUARTER					FIFTH QUARTER				
MA 302	Tech. Mathematics	4	0	4	ISc 301	Industrial Org. & Mgm.	3	0	3
PHY 302	Physics II	3	1	4	ELN 316	Transistor Applications	3	1	4
ENG 305	English II	3	0	3	ELN 317	Communications & Ultra High Frequency	2	2	4
ELEC 311	Alternating Current Electricity	3	2	5	ELN 318	Special Circuitry	3	1	4
		13	3	16		Elective	(3)	0	(3)
							14	4	18
THIRD QUARTER					SIXTH QUARTER				
MA 303	Tech. Mathematics	4	0	4	SOC 302	Economics	3	0	3
ENG 303	English III	3	0	3	ELN 319	Instrumentation	3	1	4
SOC 301	Human Relations	2	0	2	ELN 320	Circuit Analysis & Maintenance	4	2	6
ELN 312	Electronics I	3	2	5		Elective	(3)	0	(3)
DD 307	General Drafting	2	1	3			13	3	16
		14	3	17					
					TOTAL CREDIT HOURS:				
					101				

EXECUTIVE SECRETARY

The demand for better qualified secretaries in our expanding business world is acute. The Executive Secretary Curriculum is designed to offer the students the necessary skills in typing, receiving dictation, transcribing, and using secretarial terminology for employment in the various business enterprises. This special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development. During the last quarter the student engages in six hours of office application each week in a business office. Upon successful completion of the program, the graduate may be employed as a stenographer or a secretary.

MEDICAL SECRETARY OPTION

The purpose of this curriculum is to outline a training program which will provide specialized training in the accepted procedures required by the secretary in the medical profession, and to enable a person to become proficient soon after accepting employment in the medical and health occupations.

The Medical Secretary Curriculum offers the student training in the necessary secretarial skills such as: typing, dictation, transcription and medical terminology. During the last quarter the student engages in six hours of office application each week in a hospital or a physician's office.

The graduate may enter a secretarial position in a variety of offices such as physicians, private and public hospitals, Federal and State health programs, and the drug and pharmaceutical industry.

EXECUTIVE SECRETARY (with the) MEDICAL SECRETARY OPTION

Course No. and Title	C	L	CH	Course No. and Title	C	L	CH
FIRST QUARTER				FOURTH QUARTER			
ENG 302 English I	3	0	3	ENG 307 Speech and Oral Communications	3	0	3
BUS 302 Typewriting I (Elective)	1	2	3	**BUS 356E Dictation and Transcription	3	1	4
MA 310 Business Mathematics	3	0	3	DP 311 Data Processing	2	1	3
BUS 301 Introduction to Business	3	0	3	**BUS 350E Advanced Typewriting Elective*	1	2	3
BUS 306 Shorthand I	2	1	3		(3)	0	(3)
HS 302 Hygiene	2	0	2				
	14	3	17		12	4	16
SECOND QUARTER				FIFTH QUARTER			
ENG 305 English II	3	0	3	SOC 314 American Government	3	0	3
BUS 303 Typewriting II	1	2	3	**BUS 375E Dictation & Transcription	3	1	4
BUS 307 Shorthand II	2	1	3	BUS 340 Secretarial Procedures	3	0	3
BUS 320 Accounting	4	1	5	BUS 351 Business Law	3	0	3
SOC 302 Economics	3	0	3	BUS 366 Budget & Records	3	0	3
	13	4	17		15	1	16
THIRD QUARTER				SIXTH QUARTER			
ENG 306 English III	3	0	3	**BUS 370E Office Application	6	0	6
BUS 304 Typewriting III	1	2	3	**BUS 358E Dictation & Transcription	3	1	4
BUS 308 Shorthand III	2	1	3	BUS 371 Office Management	3	0	3
SOC 310 Applied Psychology	3	0	3	Elective*	(3)	0	(3)
BUS 360 Office Machines	2	1	3				
**BUS 383E Terminology & Vocabulary	1	0	1		15	1	16
	12	4	16				

*Elective courses must be selected from the associate degree curriculum. The Institute may elect to require certain courses or may let the student have a free elective.

**Those students enrolled in the Medical Secretary Curriculum will register for the Medical Secretary Option courses designated by the double asterisk.

Fourth Quarter: BUS 350M Advanced Typewriting (Medical)
 Fourth Quarter: BUS 356M Dictation and Transcription (Medical)
 Fifth Quarter: BUS 357M Dictation and Transcription (Medical)
 Sixth Quarter: BUS 358M Dictation and Transcription (Medical)
 Sixth Quarter: BUS 370M Office Application (Medical)
 Third Quarter: BUS 383M Terminology and Vocabulary (Medical)
 Fourth Quarter: BUS 384M Terminology and Vocabulary (Medical)

TOTAL CREDIT HOURS: 98

FURNITURE MANUFACTURING TECHNOLOGY

There are practically no experienced technicians capable of handling the technical problems arising in the various operations in the furniture manufacturing industry. This curriculum offers the student two years of training in the fundamental scientific and engineering principles applicable to furniture manufacturing. Graduates may enter employment as furniture industry technicians and advance to supervisory positions.

FURNITURE MANUFACTURING TECHNOLOGY (CAB)

Course No. and Title	C	L	CH	Course No. and Title	C	L	CH
FIRST QUARTER				FOURTH QUARTER			
CAB 310 Properties of Woods Used in Furniture	1	1	2	ISc 310 Furniture Mfg. & Processing	2	1	3
CAB 311 Wood Working Machinery	2	1	3	UPH 303 Upholstery Cutting & Sewing	1	1	2
MA 301 Tech. Mathematics I	4	0	4	DD 314 Furniture Drafting	1	1	2
ENG 302 English I	3	0	3	SOC 302 Economics	3	0	3
PHY 301 Physics I	3	1	4	CAB 315 Woodworking Equipment	1	2	3
HS 302 Hygiene	2	0	2	SOC 314 American Government	3	0	3
	15	3	18		11	5	16
SECOND QUARTER				FIFTH QUARTER			
DD 308 General Drafting	1	1	2	CAB 316 Furniture Construction	2	1	3
CAB 312 Processing of Woods Used in Furniture Construction	2	1	3	ISc 302 Quality Control	3	1	4
CAB 313 Machines Used in Furniture Making	1	1	2	CAB 317 Finishing Techniques	2	1	3
MA 302 Tech. Mathematics II	4	0	4	ISc 311 Furniture Machining Operations	1	3	4
ENG 305 English II	3	0	3	Elective	3	0	3
PHY 302 Physics II	3	1	4		11	6	17
	13	5	18				
THIRD QUARTER				SIXTH QUARTER			
UPH 301 Spring-up Methods	0	2	2	ISc 312 Furniture Plant Layout	2	1	3
UPH 302 Fabric-Structure & Identification	2	0	2	ISc 303 Motion Study	3	0	3
ENG 303 English III	3	0	3	MECH 313 Production Planning	3	0	3
CHEM 301 Chemistry	3	1	4	CAB 324 Cooperative Plant Training	1	5	6
SOC 301 Human Relations	3	0	3		9	6	15
CAB 314 Case Goods-Design & Construction	1	2	3				
	12	5	17				

TOTAL CREDIT HOURS: 101

MECHANICAL TECHNOLOGY: MACHINE DRAFTING AND DESIGN

Machine Drafting is the graphic language of the designer and modern engineering. The working drawing is the vital link between the engineer and manufacturing and construction. This Curriculum is designed to provide the student with the knowledge and skills necessary for mechanical drafting and design. Emphasis is placed on product and tool design, engineering standards, and the selection of methods for efficient and economical production.

Graduates of this curriculum are prepared for positions in industry as technicians, engineering assistants, technical supervisors, draftsmen and designers.

MECHANICAL TECHNOLOGY (MECH) MACHINE DRAFTING AND DESIGN (DD)

Course No. and Title	C	L	CH	Course No. and Title	C	L	CH
FIRST QUARTER				FOURTH QUARTER			
DD 301 Technical Drafting	2	2	4	DD 304 Technical Drafting	2	2	4
MA 301 Tech. Mathematics I	4	0	4	DD 310 Descriptive Geometry	2	1	3
ENG 302 English I	3	0	3	SOC 314 American Government	3	0	3
PHY 301 Physics I	3	1	4	ELN 301 Industrial Controls	3	0	3
HS 302 Hygiene	2	0	2	MECH 303 Materials, Tools & Processes III	1	1	2
	<u>14</u>	<u>3</u>	<u>17</u>		<u>11</u>	<u>4</u>	<u>15</u>
SECOND QUARTER				FIFTH QUARTER			
DD 302 Technical Drafting	2	2	4	DD 305 Design Drafting	2	1	3
MA 302 Tech. Mathematics II	4	0	4	MECH 305 Strength of Materials	3	1	4
ENG 305 English II	3	0	3	MECH 356 Physics IV	2	1	3
PHY 302 Physics II	3	1	4	DD 311 Mechanisms	3	1	4
MECH 301 Materials, Tools & Processes I	1	1	2	Elective	3	0	3
	<u>13</u>	<u>4</u>	<u>17</u>		<u>13</u>	<u>4</u>	<u>17</u>
THIRD QUARTER				SIXTH QUARTER			
DD 303 Technical Drafting	2	2	4	DD 306 Design Drafting	3	1	4
MA 303 Tech. Mathematics II	4	0	4	DD 312 Jig & Fixture Design	3	1	4
ENG 303 English III	3	0	3	SOC 302 Economics	3	0	3
PHY 303 Physics III	3	1	4	ISc 301 Industrial Org. & Mgm.	3	0	3
MECH 302 Materials, Tools, & Processes II	1	1	2	SOC 301 Human Relations	2	0	2
	<u>13</u>	<u>4</u>	<u>17</u>		<u>14</u>	<u>2</u>	<u>16</u>

TOTAL CREDIT HOURS: 99

MECHANICAL TECHNOLOGY: PRODUCTION OPTION

The Mechanical Technology: Production Curriculum is designed to provide knowledge and skills which are required of technical operators of industrial machines and equipment. Emphasis is placed on use of modern machines and hand tools, production tooling, jig and fixtures, dies, and methods for efficient and economical manufacture of industrial products and machines.

Graduates may expect employment as inspectors, technicians, tool and die makers, planners, and operators of mechanical equipment. With satisfactory performance and experience, graduates may advance to positions of supervisors, foremen, expeditors and salesmen.

MECHANICAL TECHNOLOGY (MECH) PRODUCTION

Course No. and Title	C	L	CH	Course No. and Title	C	L	CH
FIRST QUARTER				FOURTH QUARTER			
DD 307 General Drafting I	1	1	2	MECH 309 Machine Processes	1	2	3
MA 301 Tech. Mathematics I	4	0	4	SOC 314 American Government	3	0	3
ENG 302 English I	3	0	3	ELEC 301 Electrical Machinery	3	0	3
PHY 301 Physics I	3	1	4	MECH 311 Physical Metallurgy	3	1	4
MECH 306 Machine Processes	2	1	3	PHY 306 Physics IV	3	0	3
HS 302 Hygiene	2	0	2				
	15	3	18		13	3	16
SECOND QUARTER				SIXTH QUARTER			
MA 302 Tech. Mathematics II	4	0	4	MECH 312 Practical Automation	3	1	4
ENG 305 English II	3	0	3	DD 311 Mechanisms	2	1	3
PHY 302 Physics I	3	1	4	MECH 305 Strength of Materials	3	1	4
MECH 307 Machine Processes	1	2	3	ISc 302 Quality Control	3	1	4
SOC 301 Human Relations	2	0	2	Elective	3	0	3
	13	3	16		14	4	18
THIRD QUARTER				FIFTH QUARTER			
MA 303 Tech. Mathematics III	4	0	4	ISc 301 Industrial Org. & Mgm.	3	0	3
PHY 303 Physics III	3	1	4	DD 312 Jig & Fixture Design	2	2	4
ENG 303 English III	3	0	3	MECH 313 Production Planning	3	0	3
MECH 308 Machine Processes	1	2	3	ISc 303 Motion Study	3	1	4
MECH 310 Physical Metallurgy	3	1	4	SOC 302 Economics	3	0	3
	14	4	18		14	3	17
				TOTAL CREDIT HOURS: 103			

ASSOCIATE DEGREE PROGRAM IN NURSING

The need for adequately prepared registered nurses is acute, and this shortage is increasing. As advances in medical science continue to expand the life expectancy of individuals, the growth in population increases the demand for nursing services. Nursing is a health occupation devoted to conserving life and promoting health; it is based upon a scientific knowledge, nursing skills, and an understanding of the nature and needs of human beings in health and in sickness. The course of study leading to an Associate Degree in Nursing prepares the nurse to serve effectively in general duty nursing positions in hospitals and other comparable settings.

The Associate in Applied Science Degree will be awarded upon successful completion of this program, and graduates will be eligible to take the State Board examinations for licensure as a registered nurse. The educational program consists of the study of nursing theory and practice interwoven with other general college education subjects such as the basic sciences, social sciences, and English. These classes meet on the college campus and nurses are in class with other college students. Nursing experience with patients are planned in the modern, up-to-date facilities of local area hospitals. Clinical experiences are carefully selected for educational purposes. These experiences include the care of patients with medical, surgical, and psychiatric problems, and the care of mothers, infants and children.

NURSING (NUR) ASSOCIATE DEGREE PROGRAM

Course No. and Title			C	L	CH	Course No. and Title			C	L	CH
FIRST QUARTER						FOURTH QUARTER					
ENG 302	English I		3	0	3	SOC 303	Intro. to Psychology		3	0	3
HS 303	Intro. to Physical Science I		3	1	4	SOC 300	Intro. to Sociology		3	0	3
SOC 312	Personality Development		2	0	2	NUR 304	Maternal & Child Care II		4	2	6
NUR 301	Nursing Fundamentals I Activity		4	2	6	SOC 302	Economics Activity		3	0	3

PRACTICAL NURSE EDUCATION

(VOCATIONAL CURRICULUM)

The Practical Nurse Education Program is designed to make available to qualified persons the opportunity to prepare for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Graduates of accredited programs of practical nurse education are eligible to take the licensing examination given by the North Carolina Board of Nursing. This examination is given twice each year, usually in April and September. A passing score entitles the individual to receive a license and to use a legal title, "Licensed Practical Nurse." The license must be renewed annually. The Licensed Practical Nurse can apply for licensure in other states on the basis of a satisfactory examination score, without repeating the examination.

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices and, in some localities, public health facilities. In all situations the LPN functions under supervision of a registered nurse and/or a licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician.

PRACTICAL NURSE EDUCATION (NUR)

			*			
Course No. and Title			C	L	CL	CH
FIRST QUARTER:	NUR 101	Practical Nursing I	18	2	3	20
		Nursing				
		Health				
		Basic Sciences				
		Vocational Adjustment				
		Communications and Human Relations				
SECOND QUARTER:	NUR 102	Practical Nursing II	12	2	21	20
		Intro. to Medical-Surgical Nursing				
		Intro. to Maternity & Child Care				
		Administration of Oral Medications				
		Communications and Human Relations				
THIRD QUARTER:	NUR 103	Practical Nursing III	10	2	24	19
		Medical-Surgical Nursing				
		Care of Mildly Ill				
		Maternity Nursing				
		Nursing Care of Children				
		Communications and Human Relations				
FOURTH QUARTER:	NUR 104	Practical Nursing IV	10	2	24	19
		Medical-Surgical Nursing				
		Care of Seriously Ill				
		Emergency and Disaster Nursing				
		Vocational Adjustment				
		Drug Administration (Parenteral)				
Total			50	8	72	78
*CL Clinical Hours Per Quarter						

COURSE DESCRIPTIONS

(Note: Figures in parentheses represent quarter hours)

BUSINESS ADMINISTRATION (BUS)

BUS 301: Introduction to Business (3)

A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organization, and management. Prerequisites: None

BUS 302: Typewriting (3)

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Minimum speed of 30 net words a minute for five minutes. Prerequisite: None

BUS 303: Typewriting (3)

Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Minimum speed of 40 net words a minute for five minutes. Prerequisite: BUS 302 or a net speed of 30 words a minute for five minutes.

BUS 304: Typewriting (3)

Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Minimum speed of 50 net words a minute for five minutes. Prerequisite: BUS 303 or a net speed of 40 words a minute for five minutes.

BUS 306: Shorthand (3)

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. Minimum dictation rate of 40 words a minute on new material for five minutes. Prerequisite: None

BUS 307: Shorthand (3)

Continued study of theory with greater emphasis on dictation for transcription. Minimum dictation rate of 60 words a minute required for five minutes on new material. Prerequisite: BUS 306 or a dictation rate of 40 words a minute on new material for five minutes.

BUS 308: Shorthand (3)

Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Minimum dictation rate of 80 words a minute required for five minutes on new material.

Prerequisite: Bus 307

BUS 310: Written Sales Communications (3)

Develops skills and techniques in writing business communications. Emphasis is placed on writing action-getting sales letters and prospectuses. Business reports, summaries of business conferences, spot announcements for radio and

television as well as letters involving credit, collections, adjustments, complaints, orders, acknowledgments, remittances, and inquiry are also included in this course. Prerequisite: ENG 302

BUS 311: Business Mathematics (3)

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, insurance, taxes and other pertinent uses of mathematics in the field of business. Prerequisite: None

BUS 312: Marketing (3)

A study of the marketing structure within the framework of the U. S. economic system. It includes the study of the movement of goods from producer to consumer through various channels of distribution, the functions of marketing, and the social and economic implications. Prerequisite: None

BUS 313: Occupational Orientation (3)

Orients the student to the business world through basic research of business practices including a study of how and why certain company policies, rules and regulations are established. The student learns how to study and utilize library facilities in preparing various reports and analyses on such topics as: business etiquette, how to apply for a job, employee-employer relations. Prerequisite: None

BUS 314: Occupational Analysis (3)

Provision for research centers around the study of functions performed in selected jobs in distribution. Students learn methods of job analysis and application of job analysis techniques. Self analysis of and by each student is made. Ultimate objective is to help the student determine his career objective. Prerequisite: BUS 313

BUS 315: Occupational Research (3)

Selection and planning of a project related to the student's work experience as provided for in BUS 338—**Work Experience and Project**. Prerequisite: BUS 314

BUS 316: Retailing (3)

A study of the role of retailing in the economy including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends. Prerequisite: None

BUS 317: Sales Development (3)

A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required. Prerequisite: None

BUS 318: Business Law

Basic business laws, including the law of contracts, negotiable instruments, agency, partnership, corporation, deeds of conveyance, etc., will be covered. A primary objective of the course is to enable the student to know when to consult a professional lawyer. Prerequisite: None

BUS 319: Credit Procedures and Problems (3)

Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included. Prerequisite: None

BUS 320: Accounting (5)

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting—collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: None

BUS 321: Accounting (6)

Partnership and corporation accounting including a study of payrolls, Federal and State taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: BUS 320

BUS 322: Accounting (6)

Thorough working knowledge of concepts used in preparation and interpretation of financial statements. Each item of the income statement and balance sheet is carefully analyzed. Prerequisite: BUS 321

BUS 326: Business Organization and Operation (3)

A study of the legal structures of the various types of business organizations, methods of financing, internal organization and management. Prerequisite: None

BUS 327: Advertising (4)

The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media. Prerequisite: None

BUS 328: Business Insurance (3)

A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included. Prerequisite: None

BUS 329: Marketing Research (3)

Acquaintance with sources of information and data pertaining to business and industry published by business, industry, governments and educational institutions. To teach the student how to interpret statistical charts and data. Prerequisite: None

BUS 330: Marketing Research (3)

Familiarization with market research studies, objectives, how they are planned, conducted, reported and interpreted. Prerequisite: BUS 329

BUS 331: Marketing Research (6)

The student receives experience in planning, conducting, reporting, and interpreting an elementary market research study. He may work on an individual basis or as a member of a group. Prerequisite: BUS 330

BUS 332: Sales Promotion Management (b)

The scope and activities of sales promotion with emphasis on the coordination of advertising, display, special events, and publicity. External and internal methods of promoting business; budgeting, planning, and implementing the plan. Prerequisite: BUS 327

BUS 333: Personnel Management (3)

Principles of human relationships; selection of personnel by interviewing and testing; and training of personnel. Prerequisite: None

BUS 334: Transportation (3)

Introduction to transportation media—their history and development. A practical consideration of the transportation problems in business. Prerequisite: None

BUS 335: Business Management (3)

Principles of business management including overview of major functions of management such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements. Prerequisite: None

BUS 336: Economics of Distribution (3)

How our business system operates. The free enterprise philosophy is developed, followed by study of production, value and price, business cycles and other economic theories. Prerequisite: SOC 302

BUS 337: Wholesaling (3)

The development of wholesaling; present-day trends in the United States. A study of the functions of wholesaling. Prerequisite: None

BUS 338: Work Experience and Project (7)

A minimum of 231 clock hours of related on-the-job work experience during the summer between the first and second school year. The employing firm and the type of work experience must be approved by the school. As a part of this course, the student will conduct and make a written report on a project related to his job training employment. The project must be of a practical nature. The project and grade for this course will be determined jointly by the student's employer and the administration. Prerequisite: BUS 315

BUS 339: Marketing (3)

A study of the marketing structure within the framework of the U. S. economic system. It includes the study of the movement of goods from producer to consumer through various channels of distribution, the functions of marketing, the social and economic implications. Prerequisite: None

BUS 340: Secretarial Procedures (3)

Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, filing, handling the mail, telephone techniques, travel information, and insurance claims. Prerequisite: None

BUS 350E: Advanced Typewriting (3)

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and typing, projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, reports, and manuscripts. Prerequisite: BUS 304

BUS 351: Business Law (3)

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, partnerships, corporations, and agencies. Prerequisite: None

BUS 352: Business Law

Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, property rights. Prerequisite: BUS 351

BUS 355: Interpreting Accounting Records (3)

Designed to aid the student in developing a "use understanding" of accounting records, reports and financial statements. Interpretation, analysis, and utilization of accounting statements. Prerequisite: BUS 320

BUS 365E Dictation and Transcription (4)

Develops the skills of taking dictation and transcribing materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rate of speed. Prerequisite: BUS 308

BUS 357E Dictation and Transcription (4)

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business, technical and professional offices. Prerequisite: BUS 356

BUS 358E Dictation and Transcription (4)

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on neatness as well as accuracy. Prerequisite: BUS 357

BUS 360 Office Machines (3)

A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, calculator, and duplicating equipment. Prerequisite: None

BUS 361: Office Machines (3)

Instruction in the operation of the bookkeeping-accounting machines, card punch, card verifier, and the dictating and transcribing machines. Prerequisite: BUS 360

BUS 364: Business Finance (3)

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of the organization, management, and financing of business. Prerequisite: None

BUS 365: Business Finance (3)

An advanced course designed to give the student practical knowledge of the different kinds of stocks and bonds, mortgages, working capital, sinking funds, capitalization, sales of securities, surplus and dividends. Prerequisite: BUS 364

BUS 366: Budget and Record Keeping (3)

The basic principles, methods, and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record keeping in order to evaluate the effectiveness of budget planning. Prerequisite: BUS 320

BUS 368: Taxes (3)

Application of Federal and State taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance. Prerequisite: None

BUS 370E: Office Application (6)

During the sixth quarter only, students are assigned to work in a business, technical, or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study. Prerequisite: BUS 361

BUS 371: Office Management (3)

Presents the fundamental principles of office management. Emphasis on the role of office management; office automation; planning, controlling, organizing and actuating in office management. Prerequisite: BUS 340

BUS 372: Principles of Supervision (3)

Introduces the basic responsibilities and duties of the supervisor and his relationship to supervisors, subordinates, and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed. Prerequisite: None

BUS 383E: Terminology and Vocabulary (1)

To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices. Prerequisite: BUS 307

BUSINESS ADMINISTRATION SUPPLEMENT: MEDICAL SECRETARY OPTION

BUS 350M: Advanced Typewriting (Medical) (3)

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, reports, and manuscripts. Prerequisite: BUS 304

BUS 356M: Dictation and Transcription (Medical) (4)

Develops the skills of taking dictation and transcribing materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Prerequisite: BUS 308

BUS 357M: Dictation and Transcription (Medical) (4)

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of professional offices. Prerequisite: BUS 356

BUS 358M: Dictation and Transcription (Medical) (4)

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on neatness as well as accuracy. Prerequisite: BUS 357

BUS 370M: Office Application (Medical) (6)

During the sixth quarter only, students are assigned to work in a professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study. Prerequisite: BUS 361

BUS 383M: Terminology and Vocabulary (Medical) (1)

To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in professional offices. Prerequisite: BUS 307

BUS 384M: Terminology and Vocabulary (Medical) (1)

Greater emphasis on an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in a professional office. Prerequisite: BUS 383

CHEMISTRY (CHEM)

CHEM 300: Chemistry (5)

Basic chemistry is introduced briefly in order to aid the student in understanding the Organic and Biological phases which follow. Emphasis is placed upon those areas of chemistry involved in normal and abnormal cell functions. Various chemicals of the body are studied as they relate to specific physiological processes. Mathematical computations are limited to those necessary to understand laboratory reports, and develop a concept of the quantitative nature of chemistry.

CHEM 301: General Chemistry (4)

A study of the physical and chemical properties of substances, chemical changes, elements, compounds, gases, chemical combination, weights and measurements, theory of metals, acids, bases, salts, solvents, solutions, and emulsions. In addition, a study is made of carbohydrates, electro-chemistry, electrolytes, and electrolysis in their application of chemistry to industry. Prerequisite: None

CHEM 310: General Chemistry (6)

An introductory chemistry course serving as a base for future development in the chemical areas. Chemical terms, systems of measurement, atomic structure, states of matter, and the properties of elements, compounds, and mixtures constitute major fields of study. Laboratory work consists of various inorganic reactions and preparations. Prerequisite: None

CHEM 311: General Chemistry (6)

A study of the properties of gases, types of chemical reactions, equivalent weights, combining properties of the elements, functions of the periodic table and properties of electrolytes and nonelectrolytes. Classroom theory is supported by extensive laboratory work, preparing and studying the behavior of gases, types of chemical reactions and properties of solutions. Prerequisite: CHEM 310

CHEM 312: Quantitative Chemical Analysis (6)

Emphasis is placed on developing laboratory techniques employed in the volumetric analysis of acids and bases. The students will become thoroughly familiar with the principles and procedures of neutralization titration. Classroom work will emphasize the stoichiometric calculation involved in interpreting the results of analysis. Laboratory work will consist of percentage analysis of selected substances. Prerequisite: CHEM 311

CHEM 313: Quantitative Chemical Analysis (7)

The more complex types of quantitative analysis. Special emphasis on the theory of oxidation-reduction and gravimetric analysis. Instrumental analysis is introduced and use of modern analytical devices is stressed. The student will become familiar with the principles of redox reactions, ionization constants, and pH of solutions. Stress is placed on the stoichiometric calculations of quantitative chemical analysis. Classroom work complements quantitative determinations in the laboratory. Prerequisite: CHEM 312

CHEM 314: Physical Chemistry (4)

Atomic theory, states of matter, chemical thermodynamics, molecular properties of solution, equilibria, phase rule, electrochemistry, kinetics, surface chemistry, and photochemistry constitute major areas of study. Prerequisite: CHEM 312

CHEM 315: Organic Chemistry (6)

Nomenclature, structure, preparation, properties, and reactions of aliphatic organic compounds. Laboratory work emphasizes techniques. Prerequisite: CHEM 313

CHEM 316: Organic Chemistry (6)

The nomenclature, structure, preparation, properties, and reactions of aromatic organic compounds. Laboratory work emphasizes techniques and involves preparation and analysis of selected organic compounds. Prerequisites: CHEM 313, CHEM 314

CHEM 317: Industrial Chemical Analysis (8)

An industrial laboratory situation is simulated. Principles and techniques learned in previous quarters are utilized in solution of problems common to

local industry. It will be the responsibility of the instructor to determine and submit in outline form a program of suitable scope and sequence of topics which he will work out from consultation with his local advisory committee, representing the industry. This program must be approved by the administration and accepted by the appropriate State-level authority. Prerequisites: CHEM 313, CHEM 314

CHEM 318: Industrial Chemical Analysis (10)

An industrial laboratory situation is maintained and the emphasis on instrumentation is expanded. Problems of industrial quality control. Plant visitations. Prerequisite: CHEM 317

COMMERCIAL ART AND ADVERTISING DESIGN (CA)

CA 310: Survey of Art (3)

An introduction and orientation of the potential artist to a comprehensive picture of important aesthetic principles. A survey of the past which will enable the student to develop his own purposes and style. Lecture-discussion documented with paintings, sculpture, reproductions and films. Prerequisite: None

CA 311: Human Anatomy (3)

A study of the body structure with emphasis on the skeletal and muscular systems, movement and the aging process. Graphical interpretation and response to manikin and live models with emphasis on proportioning, masses and movement. Prerequisite: None

CA 312: Life Study (4)

Graphical interpretation and response to the live model covering topics such as proportioning, the aging process, character, expression and draping the model. This course will deal with building of the figure and such ingredients as placement, balance, rhythm, turning, twisting, wedging, distribution of masses, perspective of form, planes of form, abdominal arch, hair forms and variations. Prerequisite: CA 311

CA 315: Industrial Illustrating (4)

A comprehensive approach to the tools, equipment, materials and utilization of the illustration. Laboratory exercises and problems covering such topics as retouching photographs, product illustrations, production illustrations, architectural renderings, preparation of visual charts, graphs and composites. Prerequisite: CA 322

CA 316: Photography (4)

An introduction to the field of photography, photographic equipment and materials. A study of the fundamental techniques of the camera and its expressive possibilities in relation to the field of design and visual communications. Assigned camera projects, darkroom procedures and equipment. Prerequisite: None

CA 317: Photography (4)

Advanced photographic techniques and materials. Participation in studio and laboratory procedures illustrating the various applications and creative possibilities of photography in advertising. Prerequisite: CA 316

CA 320: Commercial Art and Advertising Design (7)

An introduction to drawing and basic fundamentals and principles. Emphasis is placed on line, two and three-dimensional shapes, letter indication, sketching, perspective, light and shade, equipment and materials of the art and design profession. Prerequisite: None

CA 321: Commercial Art and Advertising Design (7)

Advanced material in drawing, basic design, lettering, equipment and materials. Emphasis is placed on two and three-dimensional form, perspective, sketching, rough and finished lettering. Laboratory will consist of assigned graphical problems with critique and discussion by class participation. Prerequisite: CA 320

CA 322: Commercial Art and Advertising Design (7)

Introduction to layout and design for printing. Mechanics of layout, properties of type, and basic reproductive processes. Laboratory exercises will consist of preparation of comprehensive art form for presentation on magazine covers, trademarks, book covers, textile designs, furniture designs, two and three-dimensional display figures. Assigned graphical problems with critique and discussion by class members. Prerequisite: CA 321

CA 323: Commercial Art and Advertising Design (5)

An introduction to cartooning, intermediate layout and design techniques for the printing process. Laboratory assigned graphical problems will cover such topics as color separation, halftones, and materials for the development of posters, show cards, banners, hand-lettered documents, brochures and folders. Prerequisite: CA 322

CA 324: Commercial Art and Advertising Design (5)

Advanced problems in layout and design techniques for printing. Illustration, cartooning, animation, display design and lettering. Laboratory and graphic problems dealing with magazine and book illustrations, the fashion figure, outdoor sign writing, displays and exhibits for business and industry. Prerequisite: CA 323

CA 325: Commercial Art and Advertising Design (5)

A course providing simulated professional working conditions utilizing advanced layout and design techniques for printing, air brush, silkscreen, cartooning and animation. Each student will explore a variety of problems and present his solutions for general class critique and discussion. This course will climax with the review and presentation of the student's individual portfolio of professional work. Prerequisite: CA 324

CA 330: Painting and Illustrating (2)

An introduction to creative painting and illustrating through problems in shape, colors, space and light analysis. Laboratory exercises will explore the use of the monoprint, water color, casein, pen and ink, felt tip pen, graphic stick, conte pencil and pastels. Prerequisite: None

CA 331: Painting and Illustrating (2)

Advanced work and assigned problems utilizing water color, casein, pen and ink. An introduction will also be given to oil painting, materials and techniques. Prerequisite: CA 330

CA 332: Painting and Illustrating (2)

Student-elected projects in water color, casein, pen and ink, oil and other media. Emphasis is placed on originality and the readiness of the student to explore self-assigned graphical tasks and problems. Prerequisite: CA 331

CA 340: Advertising Principles (3)

A survey of all forms of advertising; campaign preparation; economic and social values; marketing situations; product and design of package; brand names and brand loyalty. Prerequisite: None

CA 341: Advertising Media (3)

A detailed study of all types of advertising media and the basis for selection. Students will make an analysis of the various types of media such as newspapers, magazines, television and radio, direct mail, displays and dealer aids, trade shows and supplementary media to determine customer appeal, motivation, readership and form. Prerequisite: CA 340

CA 342: Advertising Art Direction (3)

A study of the techniques used in creating effective advertising for various types of media. The physical consideration of the advertisement such as size, position, color, frequency of insertion, layout, coupons and inquiries. Analysis of techniques to cases in national, retail, mail order, industrial and professional advertising with consideration given to budgetary practices. Prerequisite: CA 341

COMMUNICATIVE SKILLS (ENG)

ENG 301: Communicative Skills-Reading Improvement (2)

A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Reading faults of the individual are analyzed for improvement, and principles of vocabulary building are stressed. Prerequisite: None

ENG 302: Communicative Skills-Grammar and Composition (3)

Course designed to develop the student's ability to read with discrimination and to write effectively. Composition throughout both quarters. A concentrated review of fundamentals in English grammar and in the reading and writing of exposition. Study of some narrative. Prerequisite: None

ENG 303: Communicative Skills-Technical Writing (3)

The fundamentals of English are utilized as a background for the organization and techniques of modern technical writing. Exercises in developing typical technical reports, using writing techniques and graphic devices, are completed by the students. Practical application in the preparation of a full-length technical report is required of each student at the end of the term. Prerequisite: ENG 302

ENG 304: Communicative Skills-Speech (2)

Technical speech to develop the speaking skills with emphasis on the dual role of communications as both a speaking and listening skill. Stress is placed on growth in poise and confidence of the student. Practice through individual speeches and group discussion. Recordings are made of the student's voice and used as an aid in speech development. Prerequisite: ENG 302

ENG 305: Communicative Skills-Grammar Composition (3)

Course designed to develop the student's ability to read with discrimination and to write effectively. Composition throughout both quarters. A concentrated review of fundamentals in English grammar and in the reading and writing of exposition. Study of some narrative. Prerequisite: ENG 302

ENG 306: Communicative Skills-Business Communications (3)

Develops skills in techniques in writing business communications. Emphasis is placed on writing action—getting sales letters and prospectuses. Business reports, summaries of business conferences, spot announcements for radio and television as well as letters, involving credit, collections, adjustments, complaints, orders, acknowledgments, remittances, and inquiry are also included in this course. Prerequisite: None

ENG 307: Communicative Skills-Oral Communications (3)

Technical speech to develop the speaking skills with emphasis on the dual role of communications as both a speaking and listening skill. Stress is placed on growth in poise and confidence of the student. Practice through individual speeches and group discussion. Recordings are made of the student's voice and used as an aid in speech development. Includes study in areas of face-to-face conversation, delegating and accepting, understanding, listening, questioning, conferences, and the use of words. Prerequisite: BUS 306

ENG 310: Dental Laboratory Terminology (2)

This course is designed specifically for the dental laboratory technology students to familiarize them with terms that are peculiar to the dental profession. Through a concentrated and detailed study of the terms, the student is provided with a vocabulary that will enable him to converse intelligently with the dentist and other members of the dental health team. Emphasis is placed on the correct spelling, definition, pronunciation and use of the terms. Prerequisite: None

ENG 313: Advertising Copywriting (3)

A study of the techniques used in creation effective advertising copy for various types of media; purposes and duties of the copywriter and legal problems encountered in copywriting. Theory and practice will be given in writing copy for the various media including retail and fashion copy, mail order, direct mail, business publications, radio and television. Prerequisite: ENG 302

DATA PROCESSING (DAT)

DAT 311: Introduction to Data Processing Systems (3)

Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses. Prerequisite: None

DENTAL HYGIENE

- DHY 301:** Clinical Practice I (3)
DHY 302: Clinical Practice II (3)
DHY 303: Clinical Practice III (3)
DHY 304: Clinical Practice IV (4)
DHY 305: Clinical Practice V (4)
DHY 306: Clinical Practice VI (4)
DHY 307: Clinical Practice VII (4)
DHY 308: Clinical Practice VIII (10)

A study of the techniques of oral prophylaxis as performed by the dental hygienist within the limits of the law; and laboratory and clinical practice sufficient to render the student competent to perform dental prophylaxis. These courses include the study of the factors which contribute to a healthy condition of the mouth, with special attention to the measures employed to arrest dental caries and adjacent tissue degeneration; study of the toothbrush and methods of toothbrushing; and chair instruction in the dental health of the patient.

- DHY 310:** Oral Hygiene (2)

Study of the problems of individual health through an analysis of the various forces which affect the human organism: the problems of health and the application of scientific facts and principles of living.

- DHY 311:** Dental Anatomy I (3)

- DHY 312:** Dental Anatomy II (3)

The growth and development of the teeth; structural formation and anatomy of the teeth and the supporting tissues, including reproduction of tooth forms by drawing and carving.

- DHY 313:** Personal and Community Hygiene (2)

Since hygiene concerns itself with the preservation and improvement in health both in individuals and in communities, this course deals with habits of living, and with multitudes of conditions over which the individual has little control personally, but in which every member of a whole community is affected.

- DHY 314:** Dental Health Education (3)

Methods and materials used in teaching dental health in schools, in public health institutions, in industry, and in dental practice; uses of statistical, visual and auditory aids; records and reports; follow-up procedures.

- DHY 315:** Embryology and Oral Histology (4)

An introductory study of cells, tissues and organic structures, with particular reference to the teeth, including the use of the microscope and the examination of slides and tissues.

- DHY 316:** Dental Roentgenology (2)

The study of the theories and methods of exposing and processing roentgenograms with sufficient clinical practice included in the program to render the student competent to perform these tasks.

DHY 317: Pharmacology (2)

Study of drugs by groups, with special consideration of those used in dentistry, including their physical and chemical properties, dosage and their therapeutic effects.

DHY 318: Nutrition (2)

Basic principles of nutrition in relation to health and disease, including consideration of diet in reference to body tissue in general and to teeth in particular.

DHY 319: First Aid (2)

Consideration of causes of accidents; safeguards against accidents; first aid as a preventive measure; administration of first aid promptly and intelligently when emergency demands.

DHY 321: Pathology (3)

Introduction to general pathology, with consideration of the more common diseases affecting the human body; clinical pathology of the diseases affecting the teeth and their supporting structures, including consideration of oral manifestations of selected systemic disturbances.

DHY 322: Public Health Dentistry I (2)

DHY 323: Public Health Dentistry II (1)

Survey of the theory and practice of preventive dentistry and public health, with emphasis upon the principles and problems of community dental health.

DHY 324: Analytical Lab Procedures (4)

These are procedures the dental team and the dentist are called upon to make tests to determine lacto-bacillus counts, to utilize approved, proven oral and body fluid analyses, blood counts, and to more effectively and conclusively show connections between the human body and the oral cavity with its many components.

DHY 325: Preventive Dentistry (1)

Those principles and methods and daily practices of an individual in good mouth health and in oral prophylaxis which play such an important role in the prevention of diseases, and in keeping the mouth, gums, teeth, in the best health. Home care, proper diet, common sense rules of mouth care are stressed as the dentists teach the patient and systematically serve them well. Prevention is an ideal that runs all through dentistry and motivates health maintenance.

DHY 326: Practice Administration (1)

The study of the correct management of a dental practice. Dentistry is a profession first and foremost, but it is also a business and concerns itself with right relations to the patient, to other dentists, to physicians and the keeping of adequate service and financial records so all dental patients may be better served. Personal and public relations, economics, community and social relations are all an important part. The patient's very best care can only be provided as his dental office and dental team serve patients well.

DHY 327: Dental Materials and Procedures I (4)

DHY 328: Dental Materials and Procedures II (3)

A study of the composition and source of materials employed in dentistry and their behavior under various treatments. The dental hygiene student learns through lectures, demonstrations and laboratory exercises to identify and prepare these materials for any of the routine dental procedures in the general practice of dentistry and in the specialties of the dental profession.

DENTAL ASSISTANT (VOCATIONAL CURRICULUM)

DEN 101: Dental Science (3)

This course is designed to show how bacteriology and dental health are related, and to demonstrate techniques for successfully coping with the bacteriological problems that arise in the dental office. A portion of the course is devoted to (1) common drugs and medications used in the dental office, their indications, dosage, methods of administration and storage, and (2) nutrition as applied to dentistry.

DEN 105: Dental First Aid (2)

This course is designed to acquaint the dental assistant student with the various emergencies in the dental office and teach the dental aspects of general first aid so that she may prepare for and assist the dentist in handling emergencies. Prerequisite: Third Quarter standing in Dental Assistant Program.

DEN 111: Dental Materials (8)

A study of the composition and source of materials employed in dentistry and their behavior under various treatments. The dental assistant student learns through lectures, demonstrations and laboratory exercises to identify and prepare these materials for any of the routine dental procedures in the general practice of dentistry and in the specialties of the dental profession.

DEN 112: Anatomy and Physiology (3)

A lecture course designed to develop a knowledge and understanding of the basic structures surrounding the teeth, formation of the primary and permanent dentition, basic anatomy of individual teeth and application of this to the carving of restorative patterns. The general anatomy of the body and the basic concepts of the normal functions of body systems are also discussed.

DEN 114: Dental Office Management (6)

This course presents the objectives and responsibilities of the dental assistant in practice dental office procedures, e. g., integral activities of the business office, operator and laboratory, ethics and laws governing the profession; applied psychology in patient management as related to both child and adult patient.

DEN 115: Sterilization, Equipment Care and Supplies (3)

This course covers the: Identification, uses, operation and care of dental equipment, both major and minor; aseptic procedure and sterilization techniques, dental supply maintenance, inventory methods, procurement, storage and distribution of all supplies necessary in the dental office. Prerequisites: DEN 101, DEN 111

DEN 116: Clinical Orientation (9)

This course is designed to develop a knowledge and understanding of functions required of the dental assistant in the operatory—chairside procedures and techniques, instruments and materials ready and available in proper sequence in both general and specialized areas of dentistry. Lectures, demonstrations and clinical practice techniques are used to teach the techniques of exposing, processing and mounting intra-oral roentgenograms the proper operation of the dental X-ray machine along with safety measures and its radiation hazards. Prerequisites: DEN 111, DEN 112

DEN 117: Advanced Clinical Orientation (8)

Contribution of DEN 116 plus limited chairside assisting with dentist and patient. Prerequisite: Third Quarter standing in the Dental Assistant Program

DEN 118: Clinical Practice (18)

Practical application of the basic skills of the dental assistant program through clinical practice. Prerequisite: Fourth Quarter standing in Dental Assistant Program

DRAFTING AND DESIGN (DD)

DD 301: Technical Drafting (4)

Introduction to drafting and design practices and principles. Attainment of basic skills and techniques of drafting; use of drafting equipment; lettering; freehand orthographic and pictorial sketching; geometric construction; orthographic instrument drawing of principal views; and standards and practices of dimensioning and noting. Methods of reproducing, filing, and storing drawings are studied and the student is introduced to "working drawings."

DD 302: Technical Drafting (4)

The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphical analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices, approved by the American Standards Association, in precision and limit dimensioning will also be included. Prerequisite: DD 301

DD 303: Technical Drafting (4)

Intersections and developments and their practical solutions will be studied and, where applicable, model solutions shall accompany the problems. The various types and methods employed to produce isometric and oblique drawings, isometric, dimetric and trimetric projections, and rendered pictorials will be included. Prerequisite: DD 302

DD 304: Technical Drafting (4)

Applications and constructions of charts, graphs, and nomographs will be studied as to their relationship to engineering and technical data. Screw threads, springs, keys, rivets, piping, and welding symbols, methods of representing and specifying will be covered. Basic mechanisms of motion transfer, gears and cams, will be studied and drawn with emphasis on methods of specifying, calculating dimensions, and delineating. Prerequisite: DD 103

DD 305: Design Drafting I (3)

Basic design is introduced in the study of motion transfer mechanisms as they relate to power trains. Principles of design sketching, design drawing, layout drafting, detailing from layouts, production drawings and simplified drafting practices constitute areas of study. Types and methods of specifying materials and workmanship are an integral part of the course. Prerequisites: DD 304, MA 302, PHY 303

DD 306: Design Drafting II (4)

Research to solve a problem in design by consulting various manuals, periodicals, and through laboratory experiments. A written technical report, preliminary design sketches, layout drawings, detail drawings, assembly and sub-assembly drawings, pictorial drawings, exploded pictorial assembly, patent drawings and specifications are required as a part of the problem. Prerequisites: DD 305, DD 310

DD 307: General Drafting I (2)

An introductory course in drafting for students needing a knowledge of drawing principles and practices for reading and describing objects in the graphic language. The student is expected to gain basic skills in drawing with instruments, lettering, geometrical constructions, freehand sketching, and describing objects orthographically with principal views. Freehand sketching and orthographic reading are to be emphasized. Prerequisite: None

DD 308: General Drafting II (2)

The student continues the study of orthographic projection with applications to orthographic instrument drawing. Dimensioning procedures and practices are emphasized and the student is introduced to the "working drawing." Methods of describing complex objects with auxiliary views and/or sections and conventions are taught. Prerequisite: DD 307

DD 310: Descriptive Geometry (3)

This is a study of the graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Also included are problems dealing with solid geometry theorems. Where applicable, each graphical solution shall be accompanied by the analytical solution and visualizations shall be stressed on every problem. Prerequisites: DD 302, MA 302

DD 311: Mechanisms (3)

Mathematical and drafting room solutions of problems involving the principles of machine elements. Study of motions of linkages, velocities and acceleration of points within a link mechanism; layout methods for designing cams, belts, pulleys, gears and gear trains. Prerequisites: DD 304, MA 303, PHY 302

DD 312: Jig and Fixture Design (4)

Designed to give the student a thorough knowledge of the principles, practices, tools and commercial standards of jig and fixture design. Through lectures, visual aids and individual project an design work, the student becomes well acquainted with the many types of jig and fixtures and their design. Prerequisites: DD 305, DD 311

DD 314: Furniture Drafting (2)

An introduction to furniture drafting. Anatomical relationships influencing furniture construction and design. Furniture sizes and influencing factors. Construction details, and standard furniture parts. Scale drawings and fullsize drawings will be made. Dimensioning practices and notes will be studied. Prerequisite: DD 132

DD 316: Air-Conditioning Systems Drawings (3)

Drawing of air-conditioning systems and study of related architectural and structural elements. Sheet metal intersections and developments and types of duct installation. Air-conditioning and refrigeration layouts, diagrams and schematics. Prerequisites: DD 308, AHR 314

ELECTRICAL TECHNOLOGY (ELEC)

ELEC 301: Electrical Machinery (3)

A course in the basic understanding and application of electricity to modern industrial machinery. Included is a study of direct current motors, motor controls and protecting devices, transformers, and the industrial applications of this equipment. Prerequisite: PHY 303

ELEC 310: Direct Current Electricity (5)

Basic electricity subjects include: structure of matter, electrical terminology and symbols, electron theory of current flow, magnets and magnetic fields. Rigorous mathematical analysis of direct current resistive circuits. Ohm's Law, Kirchhoff's Law, Thevenin's Theorem, Norton's Theorem, the Superposition Principle and loop current method. Solution of complex resistive Networks. Fundamental principles of inductors, capacitors, and time constants circuits are introduced. Prerequisite: None

ELEC 311: Alternating Current Electricity (5)

Alternating current and voltage: Alternating current theory. Mathematical analysis is made of both sine and non-sine wave forms. Inductive reactance, capacitive reactance, and impedance characteristics of alternating current are investigated. The use of vector and complex numbers in circuit impedance. Series and parallel resonant circuit conditions are compared and practical application of these conditions explained. Prerequisites: ELEC 310, MA 301, PHY 301

ELEC 312: Electrical Machines (5)

Principles of direct-current generators and motors, types and characteristics; alternating-current generators, transformers, three-phase motors, synchronous motors and single-phase motors. Prerequisites: MA 302, PHY 302, ELEC 311

ELEC 313: Electrical Controls and Circuits (4)

An introduction to control systems for acceleration, speed, and braking. Alternating current contractors and relays, drum controllers, wye-delta starters, overload and overvoltage protection and sensing devices. Typical control systems; motor control, field control; controls for air-conditioning, refrigeration and heating. Prerequisites: MA 303, PHY 302, ELEC 312

ELEC 314: Planning Electrical Installations (4)

A familiarization with the National Electrical Code; the power requirements and typical design of industrial and commercial installations. Design and calculation of illumination and electric heating systems. Prerequisites: ELEC 311, ELEC 313

ELEC 315: Electrical Instrumentation (4)

Electrical meters and their movements: indicating, integrating, recording; instrument transformers; and special metering applications. Care, operation, calibration and maintenance of electrical meters and instruments. Prerequisite: ELEC 311

ELEC 316: Electrical Power Systems (4)

A familiarization with power plants, switch gear and circuit breakers, plant distribution, transmission lines and lightning protection. Prerequisite: ELEC 314

ELEC 317: Electrical Analysis and Maintenance (4)

An introduction to troubleshooting techniques of the common problems of direct current and alternating current machines, transformers, circuit breakers and regulators. Emphasis will be on scheduling of maintenance, lubrication; and principles of plant maintenance. Prerequisites: ELEC 312, ELEC 316

ELECTRONICS (ELN)

ELN 301: Industrial Controls (3)

Industrial controls is the study of modern methods of controlling machinery by electronic circuitry. Machinery controls and electronic mechanisms that automatically operate machines will be studied. Types of motors, generators, control signals and devices, thyratron, gates, switches, and servomechanism circuits are major areas of study. Prerequisite: PHY 303

ELN 306: Basic Electronics (4)

Fundamental concepts of electron flow, thermionic emission, characteristics of diodes, triodes, tetrodes and pentodes. Practical circuits of power amplifiers and feedback circuits. Introduction to semi-conductors and transistors. Prerequisites MA 303, PHY 302, ELEC 311

ELN 307: Industrial Electronics (4)

Electronic control in industrial processes; fundamental operation of gaseous rectifiers, thyratrons, saturable reactors, timers, counters, computers, and their circuits. Prerequisites: ELN 306, ELEC 313

ELN 308: Industrial Electrics (4)

Electronics as applied to a production system; rectification; electronically controlled rectifiers, servomechanism, motors; magnetic amplifiers; ultrasonic cleaning; and variable strobe light. Prerequisite: ELN 307

ELN 312: Electronics I (5)

A treatment of electron tubes, semi-conductors and their associated circuitry; thermionic emission; diode, triode, tetrode and pentode characteristics. Theory of semi-conductor diode and transistor operation is studied in detail. Application of vacuum tubes and semi-conductors in power supplies, voltage amplifiers, and the advantages and disadvantages of each considered. Prerequisites: ELEC 310, MA 301, PHY 301

ELN 313: Electronics II (6)

Design and analysis of vacuum tube and transistor oscillators, radio frequency analysis and intermediate frequency amplifiers. Frequency stability will be explored. Prerequisite: ELN 312

ELN 316: Transistor Applications (4)

Transistor circuitry and design problems. Junction diodes, transistor triodes, tunnel and zener diodes with associated circuitry. Temperature variation, transit time, and frequency response are studied in detail. Prerequisites: ELN 313, MA 304

ELN 317: Communications and Ultra High Frequency (4)

Application of previously studied circuits to the broad field of communications and ultrahigh frequency. Amplitude and frequency modulated transmitters, receivers, wave guides, cavity resonators; klystron, magnetron and traveling wave tubes are discussed. Prerequisites: ELN 313, Concurrent with ELN 316, ELN 318

ELN 318: Special Circuitry (4)

The design and analysis of special circuitry: wave shaping, pulse techniques, broad-band amplifiers, diode switches, multivibrators, gates, magnetic amplifiers, chopper amplifiers, clipper and clamping circuits, synchro and servo-systems, photo control devices, step counters and other specific application circuitry. Prerequisites: ELN 313, Concurrent with ELN 316

ELN 319: Instrumentation (4)

A basic study of sensory devices for detecting changes in pressure, temperatures, sound, light and electricity; the associated circuitry and indicating devices. Prerequisites: ELN 313, ELN 316, ELN 318

ELN 320: Circuit Analysis and Maintenance (6)

Systematic analysis of complex circuitry. Methods of locating and correcting malfunctions. Troubleshooting by voltage measurements; resistance measurements, and waveform observations. Schematic reading and interpretation. Prerequisites: ELN 319, MA 304, PHY 304

FURNITURE MANUFACTURING (CAB)

CAB 310: Properties of Woods used in Furniture Construction (2)

The identification, structure, properties and uses of woods of economic importance in the furniture industry.

CAB 311: Wood Working Machinery and Equipment (3)**CAB 312: Processing of Woods used in Furniture Construction (3)**

The theories and techniques of converting raw wood into usable products by milling, veneering, turning, and chipping. Included is the processing of finished lumber, plywood, and other wood products.

CAB 313: Machining Woods used in Furniture Making (2)

Practical exercises in the operation of the various types of machines.

CAB 314: Case Goods—Design and Construction (3)

Class discussions and reports.

CAB 315: Wood Working Machinery and Equipment (3)

Laboratory practice will be provided for practical work on the various types of machines found in a modern furniture plant.

CAB 316: Furniture Construction (Case Goods) (3)

Lecture and laboratory work on the design and construction of modern and period furniture. The course emphasizes construction features that are economical of labor and materials and are adaptable to mass production. The course covers the use of new engineering materials and their effect on furniture construction. Prerequisites: CAB 310, DD 308

CAB 317: Finishing Techniques (3)

Theory and practice in the application of modern furniture finishes. Prerequisite: CHEM 301

CAB 324: Cooperative Plant Training (One hour lecture and 15 hours plant training per week.) (6)

FURNITURE MANUFACTURING (UPH)

UPH 301: Upholstering (4)

Upholstering is essentially a handcraft occupation offering the student an opportunity to: (1) Learn the handcraft skills involved in furniture upholstering; (2) Learn how to upholster the various styles and types of furniture; and (3) to become acquainted with the construction, springing-up, and period history of the frames to be upholstered. An ample supply of frames and covers for upholstering practice is available. Laboratory practice will provide the student with an opportunity to learn the minimum skills from the very simple to the most advanced types of operations.

UPH 302: Upholstery Fabrics (2)

A study of the basic principles of textile manufacturing and structure of woven fabrics, identification of classic decorative fabrics used for upholstered furniture coverings, with emphasis on nomenclature and physical properties and textile trade customs.

UPH 303: Upholstery Cutting and Sewing (2)

This course offers the student an opportunity to become familiar with the different types of fabrics; how to cut fabrics to the best advantage so that fabric can be saved where possible; and how to correctly measure frames and make patterns. Laboratory exercises will provide practical experience. The student has an opportunity to become familiar with the operation of the sewing machine; to sew material in order to have proper fitting of patterns and to match fabrics. The purpose is to learn the fundamentals of sewing operations.

HEALTH SCIENCES

HS 300: Human Anatomy and Physiology (4)

HS 301: Human Anatomy and Physiology (4)

A study of the structure and normal functions of the human body and its systems with emphasis upon the inter-related functions of various parts and systematic processes in the development of basic physiological principles.

HS 300N: Anatomy and Physiology I (4)

To convey to nursing students some appreciation of the systemic makeup of the body. Skeletal, muscular, and afferent and efferent nervous systems of the body are studied. Anatomical nomenclature is stressed. Laboratory time is concerned with dissection and specimen examination.

HS 301N: Anatomy and Physiology II (4)

Anatomy and Physiology is a continuation of Anatomy and Physiology I with emphasis on the remaining body systems. Basic physiology is included especially masticatory and digestive processes. Laboratory work is further specimen dissection, identification, and function.

HS 302: Personal and Community Hygiene (2)

Since hygiene concerns itself with the preservation and improvement in health both in individuals and in communities, this course deals with habits of living, and with multitudes of conditions over which the individual has little control personally, but in which every member of a whole community is affected.

HS 303: Introduction to Physical Science I (4)

HS 304: Introduction to Physical Science II (4)

The Introduction to Physical Science I and II courses are designed for the non-technical student to give him the basic principles underlying the forces and phenomena which govern our everyday life. Topics that will be considered are force vectors, friction, energy, basic electricity and a survey of modern physics. Basic fundamentals of chemistry will be introduced. These topics will be in keeping with curriculum levels of the students, and are not designed nor recommended for technical students. Nurses, dental hygienist, and similar students are advised to include Physical Science I and II in their course of study.

HS 305: Microbiology (3)

A study of micro organisms, with emphasis is on familiarizing the student with the characteristics of micro organisms, their relation to disease and sanitation and the place they occupy in everyday life. Laboratory work consists of isolation, culturing, staining, and identifying micro organisms. Designed primarily for students who plan to enter nursing, dentistry, public health or medical technology.

INDUSTRIAL SCIENCE (ISc)

ISc 301: Industrial Organization and Management (3)

Organizational structure, operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting of markets, selection and layout of physical facilities; selection, training and supervision of personnel as found in typical industrial organizations.

ISc 302: Quality Control (4)

The broad viewpoint of the subject is covered including basic principles and techniques used to effect better control, cost saving, and an efficient quality control department. Specific subjects considered include the functions, responsibilities, structure, costs, reports, records, personnel and vendor-customer relationships of the quality control department and the principles used in sampling inspection, process control and tests for significance. Practical methods for application are stressed.

ISc 303: Motion Study (3)

A course designed to prepare the student for solving the ever-increasing need of greater labor productivity in industry. Types of methods studies and the application of each are explored. Included is a study of process charts, analysis sheets and the systematic consideration of the factor of production in sequence. The various uses of time study in a manufacturing plant, the qualifications of a time study man, the principles of work simplification, skill and effort rating, and standard data are studied and applied.

ISc 309: Plant Layout (4)

A practical study of factory planning with emphasis on the most efficient arrangements of work areas to achieve lower manufacturing costs. Layouts for small and medium-sized plants, layout fundamentals, selection of production equipment and materials handling equipment. Effective management of men, money and materials in a manufacturing operation. Prerequisites: MECH 309, DD 308

ISc 310: Furniture Manufacturing and Processing (3)

A study of the production methods of the Furniture Industry. Classwork includes the production procedures from the yard through the machine, cabinet, finishing, upholstering, and shipping departments. The laboratory period is supplemented by visits to furniture plants. Particular attention is paid to production rates by departments, based on the number of men and supervisors, the quality of product produced, and the equipment used.

ISc 311: Furniture Machinery Operations (4)

Class discussions and laboratory practice on the various types of production. Prerequisites: CAB 311, CAB 313

ISc 312: Furniture Plant Layout (3)

Problems in industrial plant design with special reference to furniture manufacture; building structures, equipment location, space utilization, layout, for operation and control; allied topics in power utilization, light, heat, ventilation, and safety. Laboratory period. Prerequisites: DD 308, CAB 311, CAB 313

MATHEMATICS (MA)

MA 301: Technical Mathematics I (4)

The real number system is developed as extensions of natural numbers, integers, and rational numbers. Insight into the processes of arithmetic and algebra is provided. Additional topics include sets, equations, number bases, number lines, coordinate systems, trigonometry of right triangle, vectors, dimensional analysis, and the derivative.

MA 302: Technical Mathematics II (4)

Algebraic operations are applied to linear, quadratic, and polynomial functions and special equations of second degree. Complex numbers are introduced and the study of the derivative is continued. Selected applications involving rates of change, maxima and minima, approximation, areas, and volumes are considered.

MA 303: Technical Mathematics III (4)

Ideas of algebra are used in a study of trigonometric, logarithmic and exponential functions. Selected applications of calculus reinforce this approach. Polar coordinates are introduced and their applications expanded. Complex numbers, vectors, coordinate systems and their applications constitute other areas of study.

MA 304: Technical Mathematics IV (3)

Algebra and calculus are used in the study of plane and solid geometric figures. Topics include curve sketching, maxima and minima, plane areas, curve lengths, volumes and solids and surface areas. Some applications of first order differential equations and series representations of selected important functions are presented.

MA 310: Business Mathematics (3)

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

MECHANICAL TECHNOLOGY (MECH)

MECH 301: Materials, Tools and Processes I (2)

An overall view of the methods and procedures used to transform the raw material into a finished product. Characteristics of metals, woods, and plastics and how these characteristics affect the selection and use of materials and methods of production in the manufacture of an object. Unit production system, sand casting, forging and allied processes constitute areas of study.

MECH 302: Materials, Tools and Processes II (2)

Continuation in the study of methods of manufacturing of objects. Confined principally to the machining of materials. The operation of lathes, grinders, drills, milling machine, shapers, planers, metal sawing machines, broaching machines, gear cutting machines, and finished machines. Dimensional control and precision measuring are an important part of this study.

MECH 303: Materials, Tools and Processes III (2)

Mass-production system is discussed and various methods of production by the processes studied in previous courses are explored. Production in areas of casting, forging, molding, presswork, drilling, boring, reaming, turning, grinding, milling, and surface finishing are studied and design considerations in these areas are determined.

MECH 304: Metallurgy (5)

Properties of metals and various methods of changing these properties, classifications of metals, powder metallurgy, and factors contributing to production and selection of metals for use are areas of study.

MECH 305: Strength of Materials (4)

A study of the stresses and strains that occur in materials when subjected to tensile, compressive, and/or shearing forces. Stresses in thin-walled cylinders, riveted and welded joints, shear and bending moment diagrams, deflection, eccentrically applied loads, torsion, and factors of column design.

MECH 306: Machine Processes (3)

An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming.

MECH 307: Machine Processes (3)

A continuation of experiences begun in MECH 306 with advanced operations on the lathe, drilling, boring and reaming machines. The student will become acquainted with the milling machine in theory and practice. A thorough study will be made of the types of milling machines, cutters, jig, and fixture devices, and the accessories used in a modern industrial plant. Safety in the operational shop will be stressed at all times.

MECH 308: Machine Processes (3)

A continuation in the familiarization of the modern machine tools of industry. Through theory practice and demonstration, the student concerns himself with the shaper, slotter, planer, turret lathe, screw machine, grinding and finishing machines. Gear design and the processes of manufacturing will be analyzed throughout the course.

MECH 309: Machine Processes (3)

A study dealing with the newer concepts of work handling and automatic machining processes. A large portion of the theory units will cover topics such as methods of chipless production and new techniques in metal forming. An analysis of high energy forming, ultrasonic machining, electrolytic metal removal, chemical milling, numerical controls and simplified building block numerical control systems.

MECH 310: Physical Metallurgy (4)

This is an introductory course in metallurgy. It will present an analysis of the structure of metals and alloys, atomic structure, nuclear structure, and nuclear reactions. Topics undertaken for study will be solid (crystalline) structures, methods of designating crystal planes, the liquid and vapor phase diagrams, and alloy systems.

MECH 311: Physical Metallurgy (4)

A continuation of Physical Metallurgy I expanding on the properties of metals and alloys, the reaction of metals, diffusion, carburizing, metal bonding and homogenization. Other topics covered will be recrystallization and grain growth, age hardening, nitriding, internal-oxidation and heat treatment of steel. Laboratory experiments and demonstrations will be utilized throughout the course.

MECH 312: Practical Automation (4)

A comprehensive study of automation as it is interpreted and practiced by American industry of today. The fundamentals of automation and the results of this automation on industrial productivity, labor supply and demand, equipment and processes are topics which will be undertaken. Students will be presented with problems encountered when installing an automated system.

MECH 313: Production Planning (3)

A study of day-to-day plant direction is subdivided for analysis into forecasting, product planning and control, scheduling, dispatching, routing, and inventory control. Case histories are discussed in the classroom for clinical analysis and courses of corrective action are developed.

MECH 314: Tool Engineering (3)

An introduction to the problems of tool engineering with emphasis on such topics as planning the processes of production, development and design of the necessary tools, and finally the integration of available manufacturing facilities. A practical analysis and comparison of the use and cost of tools, jigs and fixtures, dies, molds, and gages as they are utilized in our modern day manufacturing and production methods.

MECH 355: Engineering Materials (6)

This is an introduction to materials commonly used by engineers. The physical properties of engineering materials, ferrous, non-ferrous metals, and wood and concrete are studied. Orientation to the terminology of internal structures, deterioration of materials such as corrosion, erosion, decay, organic and inorganic coatings are stressed.

MECH 356: Hydraulics and Pneumatics (3)

The basic theory of hydraulic and pneumatic systems and their combinations in various circuits. Function and basic design of circuits and motors, controls, electrohydraulic servo elements, plumbing, filtration, accumulators and reservoirs, constitute major areas of study.

NURSING (NUR) ASSOCIATE DEGREE PROGRAM

NUR 301: Nursing Fundamentals I (6)

An approach to nursing care through a knowledge and understanding of the well person: designed to develop technical skills, concepts, attitudes and understandings essential to total nursing care; integrates ethics, normal nutrition, history of nursing, personal and community hygiene, and pharmacology.

NUR 302: Nursing Fundamentals II (5)

Principles and practices in nursing further developed with further emphasis on a knowledge of pharmacology and administration of medications. Continuing to teach ethics, legal and professional responsibilities of the nurse as a member of the health team. Prerequisite: NUR 301

NUR 303: Maternal and Child Care I (6)

A basic study of the normal health needs of mothers during the maternal cycle and of infants and children from birth through adolescence. Developmental approach including theory and practice necessary to give nursing care to mother and child. Prerequisites: NUR 301, NUR 302

NUR 304: Maternal and Child Care II (6)

A continued study of maternal and child care based on understanding of the reproductive and developmental cycles of the mother and the child. Emphasis is placed on the concepts of family-centered care and on health teaching. Knowledge of the normal maternity cycle and of the growth and development of the child is used as a basis for recognition of deviations from the normal and for planning nursing care when complications occur. Study is made of diseases commonly occurring in particular age groups of children. Prerequisites: NUR 301, 302, 303

NUR 305: Medical and Surgical Nursing I (7)

Emphasizes inter-relations of social, psychological, dietary, medical-surgical nursing problems; the implications of common medical surgical conditions of the chronically and acutely ill, the child, the adult and the geriatric patient; integrates ethics, diet therapy, trends in nursing, pharmacology. Prerequisites: NUR 301, 302, 303, 304

NUR 306: Medical and Surgical Nursing II (7)

Continuation of Medical and Surgical Nursing II. Together these two courses provide the student with a comprehensive study of the more complex problems. Same areas of concentration as MSN II. Prerequisites: NUR 301, 302, 303, 304, 305

NUR 307: General Nursing Internship (11)

General bedside nursing practice in one of the local area hospitals. (8 weeks during summer between THIRD and FOURTH QUARTERS)

NUR 308: Nurse Seminar (2)

A study in depth of those aspects of nursing which have been identified as being fundamental for providing patient-centered care. Emphasis will be placed on group study and analysis of patient care problems. Coordinates the course and clinical work. Provides the senior professional orientation. Prerequisites: NUR 301, 302, 303, 304, 305, 306, 307 (NUR 308 and 309 will be taken during the same quarter.)

NUR 309: Neuropsychiatric Nursing (3)

A classroom study of the nursing needs of patients with behaviorial disorders due to mental or physical illness. Concepts of interpersonal relationships and mental health and their application in planning nursing care are included. Prerequisites: NUR 301, 302, 303, 304, 305, 306, 307

NUR 310: Psychiatric Nursing Internship (3)

Preparation to function in prevention of mental illness, care, treatment and rehabilitation of mentally ill in one of the area mental hospitals or a psychiatric ward in a general hospital. (2 weeks duration: This training may be taken during the first summer or it may be deferred until the end of the sixth quarter, but before licensing.)

**PRACTICAL NURSE EDUCATION (NUR)
(VOCATIONAL CURRICULUM)**

NUR 101: Practical Nursing I

This course aids beginning students in practical nursing in acquiring basic knowledge of nursing and related areas. The student begins to develop skills

needed for safe and effective bedside care of patients. Instruction is in the History of Nursing, Introduction to Patient Care, Basic Health (personal, physical, mental, family, and community), Basic Science (anatomy and physiology, bacteriology, and nutrition), Vocational Adjustments, Communications, and Human Relations. Beginning skills in nursing methods are developed through planned laboratory experiences, followed by related practice in actual patient care. Prerequisite: General admission requirements.

NUR 102: Practical Nursing II

This course is designed to assist practical nursing students in acquiring further knowledge and understanding and in developing further skills needed for rendering safe and effective nursing care to patients of all ages. Instruction in Medical-Surgical Nursing, Maternity Nursing, Child Care, Communications, and Human Relations. Classroom activities center on analysis of nursing needs as viewed in perspective with the needs arising from the patient and his condition. Selected experiences in patient care will provide opportunity for students to develop skill in applying classroom learnings. Prerequisite: NUR 101

NUR 103: Practical Nursing III

Instructs student in common disease conditions and develops beginning skills in rendering safe and effective nursing care to patients of all ages with specific needs arising from the illness and/or therapy. Course material deals with common medical-surgical conditions, care of the sub-acutely ill child, care of the maternity patient and the new-born infant with complications. Classroom activities deal with analysis of nursing needs arising from the specific illness condition and the medical plan. Clinical activities consist of guided experiences in nursing patients with conditions which illustrates classroom learnings. Prerequisite: NUR 102

NUR 104: Practical Nursing IV

Concentrated effort to assist the advanced practical nursing student in acquiring knowledge of needs of patients who are seriously ill, to develop beginning skills in assisting the registered nurse and/or physician in complex nursing situations, and to make the transition to the role of graduate practical nurse. Instruction concentrated on needs of seriously ill patients, needs of patients in immediate post-operative period, needs of labor patients, needs of the seriously ill child, and the student's assuming the role of the Licensed Practical Nurse. Classroom activities center on needs of seriously ill patients of all ages, of labor patients, and of post-operative patients. Clinical practice deals with guided experience in patient care to parallel classroom instruction.

PHYSICS (PHY)

PHY 301: Properties of Matter (4)

This is a fundamental course which covers several of the basic principles of physics. The divisions included are: solids and their characteristics, liquids in motion, and gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are also an integral part of this course.

PHY. 302: Work, Energy, Power (4)

The major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, force, center of gravity, and dynamics. Units of measurements and their application are also a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas.

PHY 303: Electricity (4)

Covers the basic theories of electricity, types of electricity, methods of production and transmission and transforming of electricity. Such factors as the electron theory, electricity by chemical action, electricity by friction, electricity by magnetism, induction, voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of the course.

PHY 304: Light and Sound (4)

A study of sound and wave motion and its technical applications to industry and related fields. Light and illumination. Principles of optical instruments. Practical aspects are emphasized. Prerequisites: MA 303, PHY 302.

PHY 305: Hydraulics and Pneumatics (3)

The basic theory of hydraulic and pneumatic systems and their combinations in various circuits. Function and basic design of circuits and motors, controls, electrohydraulic servo elements, plumbing, filtration, accumulators and reservoirs, constitute major areas of study.

PHY. 306: Applied Mechanics (3)

Advanced study based on the concepts and principles of statics and dynamics.

PHY 311: Fluid Mechanics (3)

Fundamental laws of fluid flow and application of these laws to the sizing of hot and cold water piping, steam piping, refrigerant piping, air ducts, pumps, and fans. Particular emphasis will be directed to calculations of capacity, horsepower, and head requirements of pumps and fans; to comparison of the several methods of piping and air duct sizing; and to methods of fluid flow measurement. Prerequisites: MA 303, PHY 302.

SOCIAL SCIENCES (SOC)

SOC. 300: Introduction to Sociology (3)

An analysis of the society and culture dealing with social organization, control institutions, stratification, and social change.

SOC. 301: Human Relations (2)

Principles of inter-personal relations including a consideration of motivation, feelings, emotions, and learning with reference to their applications to on-the-job situations; personal and group dynamics and self-adjustment.

SOC 302: Economics (3)

The fundamental principles of economics including institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large.

SOC 303: Introduction to Psychology (3)

Designed to provide an understanding of the basic psychological concepts of human behavior. The phenomenal aspects of the individual's behavior as he strives to adapt to his social and economic environment will be explored. Prerequisite: None

SOC. 304: Economics (3)

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems. Prerequisite: SOC 302

SOC 310: Applied Psychology (3)

This course stresses the procedures of building an efficient, enthusiastic business team and deals with the nature of the problems which arise in business organizations. The individual and his behavior are discussed, as well as the problems of influence and authority. Prerequisite: None

SOC 311: Orientation and Ethics (1)

A short history of the dental profession, together with a more complete history of the dental laboratory technician and laboratory association, plus the legal aspects of dental practices and dental laboratory business including the code of ethics for dental laboratory technicians as well as other dental auxiliary personnel. Prerequisite: None

SOC 312: Personality Development (3)

Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement. Prerequisite: None

SOC 313: Psychology II Human Development (3)

The psychology of childhood and adolescence. Normal biological development, of the individual to maturity will be studied. The orientation of the course is toward socio-cultural and psychological factors involved in childhood and adolescence. Prerequisite: SOC 303

SOC 314: American Government (3)

Origins, growth, and development of American political institutions, the Constitution, and evolution of American governmental structure, including executive, legislative, and judicial branches of national government.

SOC 315: Marriage and the Family (3)

A study of the American family with attention given to courtship, marriage, family relationships and interdependencies, including the social and cultural stresses emerging from contemporary family life.

SOC 316: Psychology III Abnormal Psychology (3)

The study of psychopathological behavior, its development, diagnosis and treatment. Emphasis is on the socio-cultural context of abnormality. The discussion of causative factors is focused upon socio-cultural influences of behavior. Prerequisite: SOC 313

REQUEST FOR ADMISSION PAPERS

Any student who desires to apply for admission should use the form shown below, or a personal letter, to request the necessary admission papers. An official application blank and other papers will be forwarded by return mail.

For any information not covered in the catalog, correspondence and personal conferences are cordially welcomed. Such correspondence should be addressed to the Director of Admissions, Guilford Technical Institute, Jamestown, North Carolina.

Director of Admissions
Guilford Technical Institute
Jamestown, North Carolina

Dear Sir:

Please send the necessary admission papers to:

Name _____
(First) (Middle) (Last)

Mailing Address _____

I was graduated from _____ High School in 19_____

I (have) (have not) previously attended another college or university.

I expect to enroll for _____ Semester, 19_____.

Date _____ Signed _____

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